



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

January 31, 2011

Governor Terry Branstad
State Capitol
LOCAL

Dear Governor Branstad:

Pursuant to Iowa Code Chapter 466A Section 3, Item 3e, the Watershed Improvement Review Board is submitting its annual report. Copies of this report are being provided to the President of the Senate and the Speaker of the House. An electronic copy of the report is also being provided to your office and the President of the Senate and Speaker of the House per the requirements of Chapter 466A.

The Board, codified in Chapter 466A, is an independent, self-governing body directed to award grants for water quality improvement and flood prevention in the state. The Board is authorized to request applications from soil and water conservation districts, local watershed improvement committees, public water supply utilities, counties, county conservation boards and cities and award grants to these entities. These grants are issued from the Watershed Improvement Fund.

Annual appropriations plus interest earned on the Watershed Improvement Fund allowed the Board to issue three Request For Applications in 2010. On February 19, the Board awarded grants to five applicants for a total of \$1,647,600. On July 23, the Board awarded grants to five applicants for a total of \$796,500. Finally, on November 5, the Board awarded grants to eight applicants for a total of \$1,203,500.

The Board extends its gratitude to the Governor and the General Assembly for supporting this visionary effort to improve water quality and prevent flooding and is looking forward to continuing and expanding upon this initiative.

Sincerely,

A handwritten signature in cursive script that reads "Mark Rosenbury".

Mark Rosenbury, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Karey Claghorn
Members, Watershed Improvement Review Board

MR;jn



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

January 31, 2011

John P. Kibbe
President of the Senate
State Capitol
LOCAL

Kraig Paulsen
Speaker of the House
State Capitol
LOCAL

Dear Senator Kibbe and Representative Paulsen:

Pursuant to Iowa Code Chapter 466A Section 3, Item 3e, the Watershed Improvement Review Board is submitting its annual report. A copy of this report is being provided to the Governor. An electronic copy of the report is also being provided to your offices and the Governor per the requirements of Chapter 466A.

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Annual appropriations plus interest earned on the Watershed Improvement Fund allowed the Board to issue three Request For Applications in 2010. On February 19, the Board awarded grants to five applicants for a total of \$1,647,600. On July 23, the Board awarded grants to five applicants for a total of \$796,500. Finally, on November 5, the Board awarded grants to eight applicants for a total of \$1,203,500. In addition to providing environmental benefits, these implementation projects stimulate economic recovery and create jobs through the purchasing of local goods and services.

The Board extends its gratitude to the Governor and the General Assembly for supporting this visionary effort to improve water quality and prevent flooding and is looking forward to continuing and expanding upon this initiative.

Sincerely,

Mark Rosenbury, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Karey Claghorn
Members, Watershed Improvement Review Board

MR;jn

Watershed Improvement Review Board Calendar Year 2010 Annual Report

Submitted January 31, 2011

The Watershed Improvement Fund and the Iowa Watershed Improvement Review Board (WIRB) were created in 2005. This statute is now codified in Iowa Code Chapter 466A.

The fifteen-member Board conducted six meetings throughout the year in-person or via teleconference. Meetings were held January 22, February 19, April 30, July 23, August 27 and November 5. Attachment 3 lists the board members and their organization affiliation.

The Board completed three Request For Applications (RFAs) for the Watershed Improvement Fund. The first RFA was announced October 13, 2009 and closed January 15, 2010. The second RFA was announced May 12, 2010 and closed July 1, 2010. The third RFA was announced August 25, 2010 and closed October 1, 2010.

January 15, 2010 Closing Date Request For Applications: The Board received seven applications in response to this RFA. These applications requested \$2,68 million in Watershed Improvement Funds and leveraged an additional \$9.5 million for a total of \$12.2 million of watershed project activity proposed.

On February 19, after reviewing and ranking the applications individually from this RFA, the Board met and selected five applications for funding. The five projects were approved for \$1,647,600 of Watershed Improvement Funds. Data on the five selected projects in this RFA include the following:

- These projects included portions of six counties
- The \$1.6 million requested of Watershed Improvement Funds leveraged an additional \$5.0 million for a total of \$6.6 million
- Selected individual projects were approved for funding between \$169,800 to \$500,000

Attachment 1a lists the approved projects name, applicant name, county or counties where located, and funding amount for the January 15, 2010 closing date RFA.

July 1, 2010 Closing Date Request For Applications: The Board received ten applications in response to this RFA. These applications requested \$10.8 million in Watershed Improvement Funds and leveraged an additional \$24.9 million for a total of \$35.7 million of watershed project activity proposed.

On July 23, after reviewing and ranking the applications individually from this RFA, the Board met and selected five applications for funding. The five projects were approved for \$796,500 of Watershed Improvement Funds. Data on the five selected projects in this RFA include the following:

- These projects included portions of eleven counties
- The \$796,500 requested of Watershed Improvement Funds leveraged an additional \$1.77 million for a total of \$2.56 million
- Selected individual projects were approved for funding between \$100,000 to \$200,000

Attachment 1b lists the approved projects name, applicant name, county or counties where located, and funding amount for the July 1, 2010 closing date RFA.

October 1, 2010 Closing Date Request For Applications: The Board received thirteen applications in response to this RFA. These applications requested \$2.2 million in Watershed Improvement Funds and leveraged an additional \$8.4 million for a total of \$10.6 million of watershed project activity proposed.

On November 5, after reviewing and ranking the applications individually from this RFA, the Board met and selected eight applications for funding. The eight projects were approved for \$1,203,500 of Watershed Improvement Funds. Data on the eight selected projects in this RFA include the following:

- These projects included portions of eleven counties
- The \$1.2 million requested of Watershed Improvement Funds leveraged an additional \$5.9 million for a total of \$7.1 million
- Selected individual projects were approved for funding between \$33,000 to \$200,000

Attachment 1c lists the approved projects name, applicant name, county or counties where located, and funding amount for the October 1, 2010 closing date RFA.

In cooperation with the Treasurer of State, submitted the 2010 year end report for the Rebuild Iowa Infrastructure Fund and the Revenue Bonds Capitals II Fund to the Joint Transportation, Infrastructure and Capitals Appropriations Subcommittee, the Legislative Services Agency, the Department of Management and the Legislative Capital Projects Committee of the Legislative Council.

Attachment 2 shows the locations of projects completed and the locations of active projects through December 31, 2010.

Attachment 4 contains the annual progress reports from the 62 active projects and projects finished in 2010.

**Attachment 1a. Watershed Improvement Fund Grants Awarded From the RFA
Ending January 15, 2010.**

Watershed Name	Organization	Project Length	Counties	Grant Amount
Camp Creek Watershed	Growing Green Communities	3 years	Polk, Jasper	\$322,500
Duck Creek Watershed	City of Davenport	3 years	Scott	\$400,000
Miller Creek Watershed	Monroe SWCD	3 years	Monroe	\$255,300
Otter Creek Watershed	City of West Union	2 years	Fayette	\$500,000
Tributary B Four Mile Creek Watershed	City of Ankeny	2 years	Polk	\$169,800
Funding Approved by the Watershed Improvement Review Board				\$1,647,600

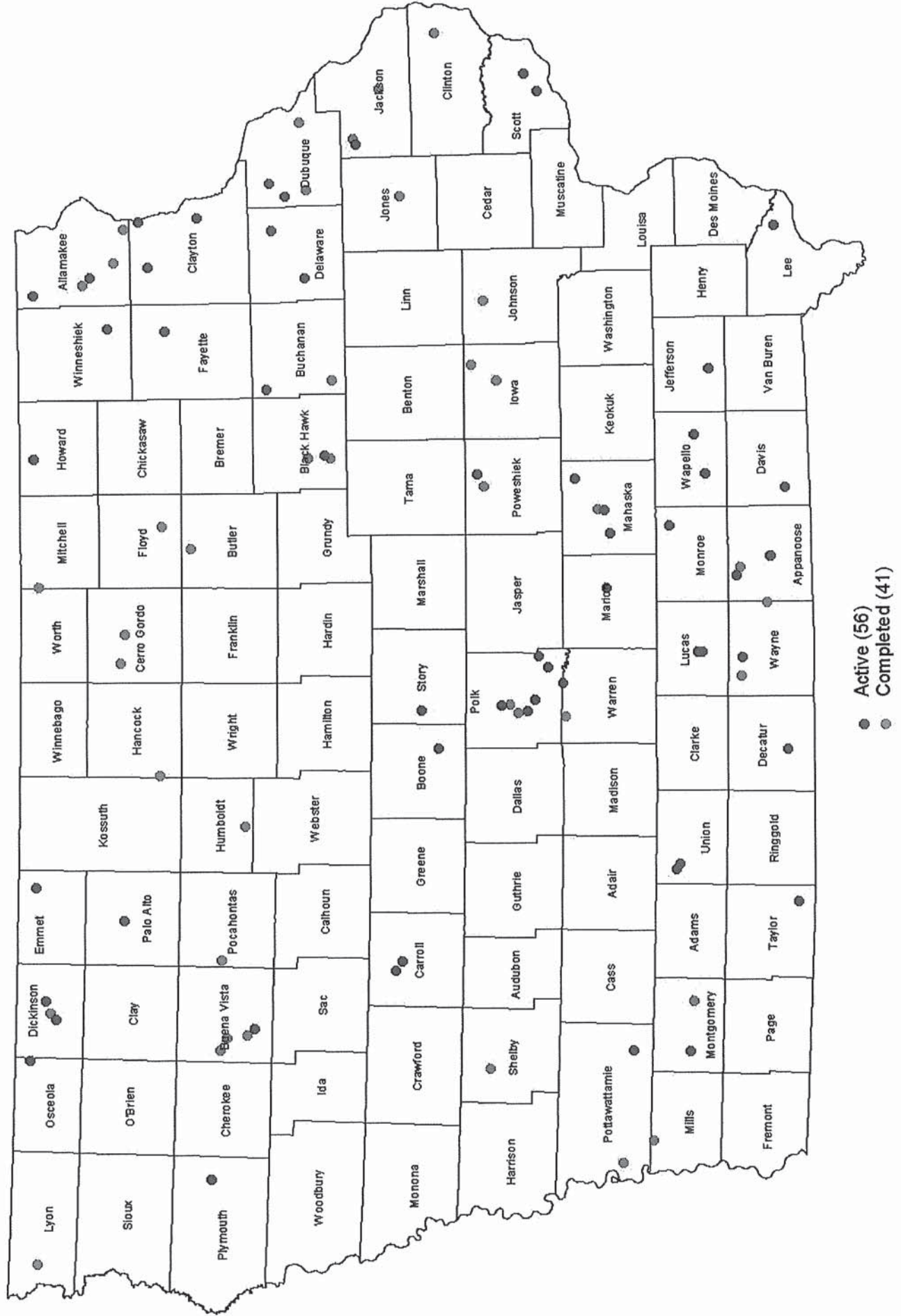
**Attachment 1b. Watershed Improvement Fund Grants Awarded From the RFA
Ending July 1, 2010.**

Watershed Name	Organization	Project Length	Counties	Grant Amount
Bloody Run Creek	City of Marquette	1 year	Clayton	\$200,000
Lost Island Lake Watershed	Palo Alo County Conservation Board	1.5 years	Palo Alto, Clay	\$180,000
Rathbun Lake Watershed	Rathbun Land and Water Alliance	4 years	Appanoose, Clarke, Decatur, Lucas, Monroe, Wayne	\$200,000
White Oak Lake	Mahaska County Conservation Board	3 years	Mahaska	\$100,000
Williamson Pond Watershed	Lucas SWCD	26 months	Lucas	\$116,500
Funding Approved by the Watershed Improvement Review Board				\$796,500

**Attachment 1c. Watershed Improvement Fund Grants Awarded From the RFA
Ending October 1, 2010.**

Watershed Name	Organization	Project Length	Counties	Grant Amount
Competine Creek	Wapello SWCD	2 years	Jefferson, Keokuk, Wapello	\$199,250
Des Moines Middle	City of Luther	1 year	Boone	\$200,000
Dry Run Creek	Black Hawk SWCD	2 years	Black Hawk	\$ 48,400
Indian Creek	City of Fairfield	1 year	Jefferson	\$ 33,000
Iowa Great Lakes Targeted Watershed Project	Dickinson SWCD	4 years	Dickinson	\$168,500
Tuttle Lake	Emmet SWCD	2 years	Emmet	\$154,350
Walnut Creek	East Pottawattamie SWCD and Montgomery SWCD	3 years	Montgomery, Pottawattamie	\$200,000
Yellow River Headwaters	Winneshiek SWCD	4 years	Allamakee, Winneshiek	\$200,000
Funding Approved by the Watershed Improvement Review Board				\$1,203,500

Attachment 2 : Active & Completed WIRB Projects (December 2010)



**Attachment 3. Appointed Members of the Watershed Improvement Review Board
January 1 - December 31, 2010, Iowa Code Chapter 466A**

Name	City	Term Ending	Sponsoring Organization
Mark Rosenbury	West Des Moines	2012	Agribusiness Assn of Iowa
Jolee Belzung	Ankeny	2013	Iowa Assn of Water Agencies
Tom Hadden	Altoona	2012	Iowa Environmental Council
Vicki Allen	Diagonal	2012	Iowa Farm Bureau
Debra Karwal	Elliott	2011	Iowa Pork Producers
Lisa Walters	West Des Moines	2013	Iowa Rural Water Assn
Robert Ballou	Monticello	2013	Iowa Soybean Assn
Jane Weber	Bettendorf	2012	Soil and Water Conservation Districts of Iowa
Keri Van Zante	Newton	2012	Iowa Assn of County Conservation Boards
Jim Gillespie	Earlham	2011	Representative of IDALS
Bernie Hoyer (January-June)	Des Moines	2011	Representative of DNR
Steve Hopkins (July-December)	Des Moines	2011	Representative of DNR
Dennis Black	Grinnell	2011	State Senator
David Johnson	Ocheyedan	2011	State Senator
Betty De Boef	What Cheer	2011	State Representative
Dolores Mertz	Ottosen	2011	State Representative

Attachment 4. 2010 Annual Project Reports Table of Contents

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page Number</u>
9006	Bear Creek Watershed	Delaware SWCD	Delaware	10
9025	Beaver Creek Watershed (report not received at time of filing)			
1010	Bloody Run Creek Watershed (report not received at time of filing)			
7031	Brushy Creek Watershed	Des Moines Water Works	Carroll	11
8010	Camp Creek Watershed (report not received at time of filing)			
9033	Camp Creek Watershed	Growing Green Communities	Polk	12
7003	Clear Lake Watershed	Hancock SWCD	Cerro Cordo and Hancock	13
7025	College Creek Watershed Improvement Project	City of Ames	Story	14
1011	Competine Creek Water Quality Improvement Project	Marion SWCD	Marion	15
8027	Competine Creek Partnership Watershed Improvement Project	Wapello SWCD	Jefferson, Keokuk and Wapello	16
1019	Des Moines Middle Watershed	City of Luther	Boone	17
8023	DMACC Lake Watershed Improvement Project	Polk SWCD	Polk	18
7033	Dry Run Creek Sub-Watershed	Floyd SWCD	Floyd	19
1022	Dry Run Creek Watershed Improvement Project	Black Hawk SWCD	Black Hawk	20
8024	Duck Creek Watershed	River Action, Inc.	Scott	21
9031	Duck Creek Watershed	City of Davenport	Scott	22
8006	East Okoboji Lake	Dickinson SWCD	Dickinson	23
9020	Fox River Water Improvement Project	Fox River Ecosystem Development Board	Appanoose and Davis	24
9010	Hawthorn Lake Watershed	Mahaska SWCD	Mahaska	25
9008	Hewitt Creek Watershed	Hewitt Creek Watershed Improvement Association, Inc.	Dubuque	26
7020	Hurley Creek Watershed/McKinley Lake Watershed Improvement Project	City of Creston	Union	27
1015	Indian Creek Watershed	City of Fairfield	Jefferson	28
9002	Indian Springs Pond Watershed Project	Allamakee SWCD	Allamakee	29

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page Number</u>
1016	Iowa Great Lakes Targeted Watershed (report not received at time of filing)			
7011	Keg Creek Watershed	Regional Water Association	Mills	30
7042	Kettle Creek Watershed	City of Ottumwa	Wapello	31
6034	Lake Colchester/Middle Creek	Lakewood Village Association	Warren	32
8012	Lake Morris Watershed	Lucas SWCD	Lucas	33
7017	Little Clear Lake (report not received at time of filing)			
9012	Little River Lake	Decatur SWCD	Decatur	34
9009	Lost Creek Watershed	Lee SWCD	Lee	35
1009	Lost Island Lake Watershed	Palo Alto County Conservation Board	Palo Alto	36
8011	Ludlow Creek Watershed	Allamakee SWCD	Allamakee and Winneshiek	37
9014	Lytle Creek Watershed	Limestone Bluffs RC&D Area, Inc.	Jackson	38
9032	Miller Creek Watershed	Monroe SWCD	Monroe	39
7039	Miners Creek Water Quality Project	City of Guttenberg	Clayton	40
8013	Muchakinock Creek Watershed	Mahaska SWCD	Mahaska	41
7043	North Fork Maquoketa River Headwaters Watershed	Coffee Creek Watershed Improvement Association	Dubuque and Delaware	42
9029	Otter Creek Watershed (report not received at time of filing)			
7013	Rathbun Lake Watershed: BMPs for Priority Land in Targeted Sub-Watersheds 2007	Rathbun Land and Water Alliance	Clarke, Lucas and Wayne	43
8008	Rathbun Lake Watershed: BMPs for Priority Land in Targeted Sub-Watersheds 2008	Rathbun Land and Water Alliance	Decatur and Wayne	44
9018	Rathbun Lake Watershed: BMPs for Priority Land in Targeted Sub-Watersheds 2009	Rathbun Land and Water Alliance	Appanoose, Clarke, Decatur, Lucas and Wayne	45
1004	Rathbun Lake Watershed: Strategic Use of Sediment Basins	Rathbun Land and Water Alliance	Lucas and Wayne	46
8025	Remsen Source Water Protection (report not received at time of filing)			
7021	Sand Creek Watershed	Delaware SWCD	Delaware	47

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page Number</u>
8021	Sands Timber Water Quality Project	Taylor SWCD	Taylor	48
7040	Saylor Creek Sub-Watershed	City of Ankeny	Polk	49
9005	Silver Creek Watershed Project	Clayton SWCD	Clayton	50
8005	Silver Lake Watershed	Osceola SWCD	Dickinson and Osceola	51
7014	South Raccoon/Maple River Junction (report not received at time of filing)			
8019	Staff and Beaver Creek	Howard SWCD	Howard	52
8009	Storm Lake Watershed	Lake Preservation Association for Storm Lake, Inc.	Buena Vista	53
8004	Summit Lake Watershed	City of Creston	Union	54
9028	Tributary B Four Mile Creek	City of Ankeny	Polk	55
1017	Tuttle Lake (report not received at time of filing)			
9007	Upper Buffalo Creek Watershed	Buchanan SWCD	Buchanan and Fayette	56
7024	Volunteer Creek Watershed	City of Carlisle	Warren	57
8018	Walnut Creek	Montgomery and East Pottawattamie SWCDs	Montgomery and Pottawattamie	58
9011	Walnut Creek Watershed	Poweshiek SWCD	Poweshiek	59
1014	Walnut Creek	Montgomery and East Pottawattamie SWCDs	Montgomery and Pottawattamie	60
1008	White Oak Lake Watershed (report not received at time of filing)			
1003	Williamson Pond Watershed	Lucas SWCD	Lucas	61
1012	Yellow River Headwaters	Winneshiek SWCD	Winneshiek and Allamakee	62

Project Name: Bear Creek Watershed
Project Sponsor: Delaware Soil and Water Conservation District
Length of Project: January 1, 2010 to December 31, 2011

Counties included in the project area: Delaware

Total Watershed Improvement Funds awarded for this project:	\$ 347,950
Total Watershed Improvement Funds spent:	\$ 88,621
Total Watershed Improvement Funds obligated:	\$ 29,901
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 229,428

Project objectives:

- Administer the Bear Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented
- Improve livestock waste storage.
- Improve livestock waste usage.
- Decrease sediment losses to Bear Creek by 2,319 tons per acre per year.
- Improve education and area outreach

Summary of accomplishments and water quality outcomes

A planning meeting in conjunction with Mississippi River Basin Initiative(MRBI) on July 14 at Dyersville, Iowa was held with 35-40 landowner/operators attending. There was 4 MRBI contracts in Delaware and 5 in Dubuque Counties. All these areas are in WIRB Funded Watershed. Bear Creek Watershed, Upper North Fork and Hewitt Creek. Delaware has 10 applications on file for FY 2011 MRBI funding. If Bear Creek Watershed projects are not funded by MRBI funds the district will use WIRB funds to construct them.

Bear Creek Watershed had a good fall for terrace and water and sediment control basins construction. The project completed 5,750 ft of terraces, and 5 water and sediment control basins with WIRB and MRBI funding. There has been 28,780 feet of terrace, 139.7 acres of waterways (95.0 ac- CRP and 44.7 ac- WSPF-WIRB), 42.6 acres of CRP filter strips, 1,133 acres of new notill acres and 19 water and sediment control basins have been applied in this project. Project Coordinator has surveyed two waterway sites for CRP (4 .9 acres) and 1,500 feet of terrace to be built in spring. A landowner has expressed interest in 20 some acres of CRP riparian on lower end of Bear Creek. This will eliminate pasturing on the ½ mile stretch of Bear Creek. There are 10 MRBI applications on file as of Dec 29. Three of these are for ag-waste sites to replace open lots. Two landowners inquired about filter strips along Bear Creek about 8 acres. Sediment delivery reduction in Bear Creek Watershed in state FY 2010 was 1230 tons and the reduction in 2011 is 360 tons, as of Jan 1. The total reduction for the project is 6,735 tons from 2006.

The Project Coordinator has worked with three landowner/operators on manure storage structures of various types. Two of these landowners have signed applications for MRBI cost share funds.

Project Name: Brushy Creek
Project Sponsor: Des Moines Water Works
Length of Project: January 1, 2009 – December 31, 2011

Counties included in the project area: Carroll

Total Watershed Improvement Funds awarded for this project: \$206,500
Total Watershed Improvement Funds spent: \$102,123
Total Watershed Improvement Funds obligated: \$0
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$104,377

Project objectives:

- Begin process of identifying producers: completed.
- Form a Watershed Improvement Association: started but not completed
- Acquire Water Monitoring Data: 2010 goals completed
- Implement Improvement Strategies: ongoing, several have been implemented
- Conduct Cornstalk Nitrogen testing: 2010 goals completed
- Conduct Soil nutrient testing: 2010 goals completed
- Production of Project Summary Reports: 2010 reports completed
- Develop Communication Materials: Started but not completed

Summary of accomplishments and water quality outcomes

Formation of a Watershed Improvement Association: Three watershed meetings were in held in 2010. These included WIRB/EQIP informational meeting on December 13; a cornstalk nitrogen testing meeting on December 20, and a communications planning meeting on August 9. **EQIP/Producer Cost Share Projects:** Completed were one large (\$50,000 EQIP, \$230,000 Producer) manure containment project, three comprehensive nutrient management plans (CNMP) (\$17,472 EQIP, \$4000 Producers), and many other cost share projects. 2010 federal cost share was \$203,348; producer contributions exceeded \$300,000. Two manure storage facilities are planned (EQIP \$100,000, Producers \$400,000). 9300' of terraces and 35,466' of grass waterways were constructed in 2010. The watershed could receive ~\$400,000 in federal money in 2011, due to momentum provided by the WIRB project. NRCS devoted 266 hours to the project in 2010, at no charge to WIRB.

Monitoring: Stream quality was assessed in 2010 by collection and analyses of 373 nitrate, 358 *E. coli*, 136 ammonia, 2 phosphorous, 15 total organic carbon, and 2 emerging contaminant samples. Four sample events were conducted with automated samplers during rain events.

Bioreactor: One bioreactor was completed and receives water from a tile containing the highest nitrate concentration ever measured by the DMWW lab in the Raccoon River watershed. Expectations are that this bioreactor will reduce nitrate loads 60-80% in the water from that tile.

Website/Communications Materials: A project website has been created and project information is posted there: <http://www.dmww.com/SubPageHTML.aspx?SubPageID=115>. A SWCD/WIRB newsletter will be mailed to land owners in February of 2011.

Corn Stalk Nitrogen Testing: Corn stalk N testing was conducted on 26 fields. Many of these samples indicate excess fertilization. IA Soybean and NRCS staff are working with producers to optimize fertilization practices for economic benefit and environmental performance.

Project Name: Camp Creek Watershed Erosion Control Project
Project Sponsor: Growing Green Communities
Length of Project: April 1, 2010 to March 31, 2013

Counties included in the project area: Polk

Total Watershed Improvement Funds awarded for this project: \$322,500
Total Watershed Improvement Funds spent: \$ 70,000
Total Watershed Improvement Funds obligated: \$0
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$252,500

Project Objectives:

- Administer the Camp Creek Watershed Erosion Control Project.
- Protect erosion-control Best Management Practices (BMPs) to be constructed by recording them as conservation easements.
- Design and construct selected BMPs at selected sites within the Camp Creek Watershed.
- Reduce soil loss from landowner property and sediment delivery to Camp Creek by 10 tons per acre per year.
- Conduct an information and education program to increase awareness of water quality, particularly within the Camp Creek Watershed.

Summary of Accomplishments and Water Quality Outcomes

The main tasks for 2010 included:

- Discussion of project and investigating sites with potential landowner participants.
- Development of education and outreach material for potential landowner participants.
- Purchase of a 42.5-acre parcel of land for BMP implementation. 10 acres are designated as WIRB-funded, with the additional 32.5 acres purchased by Metro Waste Authority.
- Identify interest for potential project participation with two landowners.

If the concentrated flow paths and resulting gullies on the purchased 42.5-acre property are repaired, the potential reduction of soil loss, according to the Watershed Sediment Delivery Calculator, is approximately 695 tons per year. This produces an average reduction in soil loss and sediment delivery to Camp Creek of 16.4 tons per acre per year, exceeding the goal of 10 tons per acre per year.

There are two other parcels owned by two landowners that are being considered for project participation. Total acres and potential BMPs are currently under discussion.

When participants and parcels of land are finalized, work will begin on preparation of conservation easements and design of BMPs. It is anticipated that Growing Green Communities will facilitate the easement preparation and the Natural Resources Conservation Service (NRCS) will design the BMPs.

Name of Project: Clear Lake Storm Water Improvement Project
Project Sponsor: Hancock Soil & Water Conservation District
Length of Project: Length of Project January 2008 to December 2010

Counties included in the project area: Cerro Gordo and Hancock

Total Watershed Improvement Funds awarded for this project:	\$ 154,000
Total Watershed Improvement Funds spent:	\$ 154,000
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 0

Project objectives:

- Investigate 7 storm water outlets in the Clear Lake Watershed to determine most cost effective Best Management Practice (BMP) to reduce storm water contaminants.
- Install storm water BMPs at 4 of the outlets investigated to reduce storm water contaminants.
- Perform information and education activities to increase public awareness about storm water improvements.
- Evaluate the effectiveness of any new type of BMP that is installed for which no local data currently exists.

Summary of activities and accomplishments for calendar year 2010

Construction of all five remaining storm water improvements was completed in 2010 by Yohn Co. The construction of the other two improvements was completed in 2009. Six of the sites were located within the City of Clear Lake and one site was located within the City of Ventura. Veenstra & Kimm (V&K) engineering was retained to oversee construction. The BMP installed at all seven sites was grit collection chambers, which have previously been installed at more than 20 other storm water outlets in the watershed. The grit collection chambers are expected to remove 80% of sediment and 68% of phosphorus from the storm water that passes through them. The seven installations will reduce sediment loading by 10 tons and phosphorus loading by 38 pounds annually. The completion of this project allowed the local communities to achieve their goal of improving all storm water outlets that have a drainage area of five acres or more for which a feasible BMP exists.

Favorable spring construction weather allowed all installations to take place ahead of schedule and the project was completed in May. Due to the expedited completion of the project, the total construction cost came in at \$346,517.75, which was 11% less than the bid amount. WIRB funding accounted for 35% of the cost share total. The other funding partners consisted of the City of Clear Lake, City of Ventura, EPA 319, and the Hanson Foundation.

Several information and education activities such as tours and PowerPoint presentations were provided to state officials, local students, and local service groups to explain the importance of the storm water quality improvements.

Project Name: College Creek Watershed Improvement Project
Project Sponsor: City of Ames
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Story County

Total Watershed Improvement Funds awarded for this project:	\$304,335
Total Watershed Improvement Funds spent:	\$304,335
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 0

Project objectives:

- Administer project and implement all activities and objectives in the project
- Integrate residents and recreational users with project technical staff in the process of design, planning, and construction of stream, riparian and upland water quality enhancement practices
- Engineer/design water quality enhancement practices; practices included are engineering-sound, biologically-friendly, and sensitive to the public's sense of aesthetics and interest in native plant communities
- Construct stream channel and stream bank stabilization and riparian enhancement
- Monitor and evaluate outcomes; changes in storm water runoff quantity and quality and stream bank stability will be measured

Summary of activities and accomplishments for calendar year 2010

College Creek neighborhood residents volunteered to have stormwater bmp's in their yards and a total of 41 practices have been constructed. Both front and rear yard bioretention and vegetative filter strip practices were included. Storm drain flow meter comparisons (pre- and post-construction), particularly in front yard applications, suggest immediate and measureable reductions in discharge reaching the storm drain system. Water quality sampling continued throughout the calendar year.

Throughout 2010, the primary focus of the project activity was on design and construction of the Stream Channel and Bank Stabilization as well as the Riparian Enhancement. The engineering consultant and City staff held numerous meetings with adjacent property owners to ensure that they understood the project impacts and that the design met their expectations. Meetings were also held with urban hydrology and geotechnical specialists to confirm the best management practices for the project. In June 2010 a massive wind storm came through Ames that impacted several trees within the project limits. In August 2010, the City of Ames experienced record flooding. Through the experience of these events, several additional property owners contacted the City of Ames to show interest in being a part of the stabilization project. The original grant had targeted 4,095 LF of Stream Channel and Bank Stabilization. Overall, 4,255 LF of Stream Channel and Bank was stabilization as part of this project. Based on USDA NRCS estimate method, soil loss has been reduced by 154 tons/year as a result of this construction. The clarity of the water changed right before your eyes. Approximately half an hour after the contractor had completed the stabilization, the water in the stream was crystal clear.

Project Name: Competine Creek Water Quality Improvement Project
Project Sponsor: Marion Soil and Water Conservation District
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Marion

Total Watershed Improvement Funds awarded for this project: \$199,530
Total Watershed Improvement Funds spent: \$ 66,983
Total Watershed Improvement Funds obligated: \$ 31,250
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$101,297

Project objectives:

- Administer the Competine Creek Water Quality Improvement Project to Ensure All Objectives and Activities Planned are Implemented
- Reduce Pollutant Delivery to Competine Creek by 1,787 Tons of Sediment and 2,144 Pounds of Phosphorus per Year
- Install Urban Conservation Practices that Reduce the Volume of Peak Flow, Improve Stream Bank Stability, and Promote Infiltration of Stormwater Runoff
- Conduct an Information and Education Program to Increase Awareness and Knowledge of Competine Creek Water Quality Issues to Watershed Residents and the Local Community

Summary of accomplishments and water quality outcomes

- Submitted annual progress report
- Reported monthly progress to SWCD Commissioners
- Met with advisory committee quarterly
- Met with landowners of highly ranked potential sites meeting high priority criteria
- Surveyed, designed and supervised 8 projects meeting high priority criteria
- Projects implemented include 2 grade stabilization structures, 30 water and sediment control basins, 4350' of contour terraces and 1 acre of grassed waterways resulting in a reduction of 1143 tons of Sediment and 1372 pounds of associated phosphorus delivered to the priority water body
- Designed and supervised construction of an urban rain garden within the city limits to reduce the volume of peak flow and promote infiltration of storm water runoff
- Continued IOWATER water quality monitoring as a means of assessing water quality concerns within the priority watershed
- Continued education and stewardship program with the local community to increase awareness and knowledge of water quality issues
- Conducted field day with local Middle School students to promote the importance of good stewardship of water resources
- Submitted 2 news releases on project activities

Project Name: Competine Creek Partnership Watershed Project
Project Sponsor: Wapello County Soil & Water Conservation District
Length of Project: December 15, 2010 to December 31, 2012

Counties included in the project area: (Jefferson, Keokuk, and Wapello)

Total Watershed Improvement Funds awarded for this project:	\$199,250.00
Total Watershed Improvement Funds spent:	\$ 00.00
Total Watershed Improvement Funds obligated:	\$ 00.00
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$199,250.00

Project objectives:

- Establish 64,486' of tile outlet terraces, 12 grade stabilization structures and 12 water and sediment basins over the 2 years of the project.
- Reduce sediment delivery to Competine Creek by 3,617 tons/year and flood water discharge by 9%
- Establish 40 acres of CRP Buffers over the life of the project
- Construct 2 urban conservation practices utilizing REAP and landowner contributions
- Conscientious administration ensuring objectives planned are implemented

Summary of accomplishments and water quality outcomes

A Sheet/Rill assessment, RASCAL assessment and hydrologic study, were completed on Competine Creek in 2009. The analysis of the assessment data pinpointed 2,760 acres as high priority areas delivering sediment at a rate of equal to or greater than 1 ton/acre/year. Landowners in these high priority areas have been identified and applications for conservation practices located in these areas are currently being accepted at the Keokuk, Jefferson and Wapello Counties offices.

Project Name: Des Moines Middle Watershed (City of Luther)
Project Sponsor: City of Luther
Length of Project: September 30, 2012

Counties included in the project area: Boone

Total Watershed Improvement Funds awarded for this project: \$ 200,000.00
Total Watershed Improvement Funds spent: \$ 0.00
Total Watershed Improvement Funds obligated: \$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 200,000.00

Project objectives:

- Objective 1. Administer the City of Luther Sanitary Sewer Collection System and Wastewater Treatment Plant Project and work with all stakeholders to ensure all project objectives are implemented as scheduled.
- Objective 2. The installation of a sanitary sewer collection system and controlled discharge lagoon in the City of Luther that will collect and treat the City's wastewater. The collection and treatment of the City's wastewater will improve water quality of the Middle Des Moines Watershed by doing the following prior to discharge of wastewater: effective in removal of settleable solids, BOD₅ (up to 95% removal), significant removal of ammonia nitrogen (up to 80%), removal of phosphorus (approximately 50%), and removal of pathogens and fecal coliforms.
- Objective 3. Educate the public in the City of Luther and the Des Moines Middle Watershed about the sanitary sewer collection system and wastewater treatment facility improvement project and establish comprehensive education and communications strategies to promote the water quality benefits of the project to the City and watershed.

Summary of accomplishments and water quality outcomes

- The Grant Agreement between the City of Luther and The Watershed Improvement Board was signed on 12/15/2010.*
- Engineered design of water quality improvements has just recently begun and no construction activity has started.*
- A draft Comprehensive Plan of Work for the project, detailing objectives, actions, and water quality outcomes was submitted to IDALS on 12/15/2010 and is currently under revision based on review comments received from IDALS.*

** The accomplishments listed above are required preliminary actions (prior to construction of improvements) that do not have a direct impact on water quality. However, these actions will result in the construction of improvements that will improve the water quality of the Des Moines Middle Watershed after completion.*

Project Name: DMACC Lake Watershed Improvement Project
Project Sponsor: Polk Soil & Water Conservation District
Length of Project: May 1, 2009 to April 30, 2012

Counties included in the project area: Polk County

Total Watershed Improvement Funds awarded for this project: \$500,000
Total Watershed Improvement Funds spent: \$496,899.29
Total Watershed Improvement Funds obligated: \$3,100.71
Watershed Improvement Fund unobligated balance as of 12/31/2009: \$0

Project objectives:

- **Objective 1** Submit all administrative reports and budgets according to requirements.
- **Objective 2** Develop final design of the DMACC Lake Watershed improvements of the WIRB project including: 1) creek stabilization, 2) surface restoration, 3) water quality improvements, 4) forebay, 5) Vortech unit, 6) native filter strip, and 7) educational signage.
- **Objective 3** Construct DMACC Lake Watershed improvements for the WIRB project consisting of 1) creek stabilization, 2) surface restoration, 3) water quality improvements, 4) forebay, 5) Vortech unit, 6) native filter strip, and 7) signage.

Summary of accomplishments and water quality outcomes

The DMACC Lake Watershed Improvement Project had an active second calendar year of project activities. Final stabilization seeding of the Phase I creek channel improvements and in-stream rock riffles were completed in spring 2010. All Phase II construction activities were able to be completed in 2010, even with the very rainy weather conditions for much of the year.

In May three acres of lawn were removed and retrofit with a mix of native Iowa prairie species. This native planting was hydroseeded along the east shores of DMACC Lake as a buffer to absorb runoff and filter pollutants before they reach the waters edge.

In July, the large concrete hydrodynamic separator Vortech unit was delivered and installed. A large crane was needed to remove the unit from the truck and place it into a large hole downstream of the large parking lot draining into DMACC Lake. It now functions to remove floating litter, sand, and pollutants prior to runoff reaching DMACC Lake.

In September work began to retrofit several storm drain inlets on campus that delivered water directly to DMACC Lake without treatment. These inlets were modified to allow water pollutants to settle out and biowalls were added to infiltrate and cleanse runoff water.

Work also began on a constructed wetland and associated forebay on the northwest side of campus. This is an area north of the lake where a large storm drain released untreated storm water flow into the lake. It was retrofit with a forebay to remove sand and other large pollutants. After flowing through the rock structure out of the forebay, the water works its way through the long pathway of the constructed wetland system where it will have time for many pollutants to be removed through natural systems.

The final steps in the completion of the DMACC Lake Watershed Improvement project is to install signs around the campus to point out all these retrofit features and the improvements to water quality in the lake. The signs will be completed this winter and installed in the spring.

**Dry Run Creek Sub-Watershed Improvement Project
Floyd County Soil & Water Conservation District
May 1, 2008 to March 1, 2010**

Counties included in the project area: Floyd

Total Watershed Improvement Funds awarded for this project:	\$75,000.00
Total Watershed Improvement Funds spent:	\$67,122.82
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2009:	\$ 7,877.18

Project objectives:

- Administer the Dry Run Creek Sub-Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Construct alternative outlets for three ag drainage wells.
- Reduce nutrient delivery to surface water and aquifer through application of nutrient and pest management plans on 400 acres
- Conduct an information and education program to increase awareness and knowledge of Dry Run Creek Sub-Watershed

Summary of activities and accomplishments for calendar year 2010

Project final report was completed and submitted on March 1, 2010.

Project Name: Dry Run Creek Watershed Improvement Project
Project Sponsor: Black Hawk Soil and Water Conservation District
Length of Project: January 2011 – November 2013

Counties included in the project area: Black Hawk

Total Watershed Improvement Funds awarded for this project:	\$ 48,400
Total Watershed Improvement Funds spent:	\$ 0
Total Watershed Improvement Funds obligated:	\$ 48,400
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 0

Project objectives:

- Implement bioretention cells and a green roof to treat 100% of the first flush of stormwater from a 5.16 acre new student housing development on the University of Northern Iowa Campus

Summary of accomplishments and water quality outcomes

Meetings have been held between the University and District representatives to put administrative agreements in place between the University's Office of Sponsored Programs and the district. In addition, funding requests have been sent to the University for signatures. These requests will formally obligate funding within the districts 319/WSPF grant to fulfill the district's cost share leveraging as specified in the grant application.

Project Name: Duck Creek Buffer Program
Project Sponsor: River Action, Inc.
Length of Project: June 1, 2009 – June 30, 2011

Counties included in the project area: Scott County

Total Watershed Improvement Funds awarded for this project: \$124,375
Total Watershed Improvement Funds spent: \$30,983.88
Total Watershed Improvement Funds obligated: \$55,655.39
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$37,735.73

Project objectives:

- Administer the Duck Creek Buffer Program to ensure all objectives and activities planned are implemented.
- Construct 16 acres of buffer along Duck Creek's main stem and tributaries on public and private lands.
- Address Duck Creek's impairment- E.coli bacteria, and improve physical and biological conditions of the stream.
- Conduct an awareness and education campaign to increase awareness and provide education of Duck Creek's condition and the practices that degrade and improve the watershed and creek.

Summary of accomplishments and water quality outcomes

- Discussions with the cities of Davenport and Bettendorf led to committed partnerships.
- A comprehensive collection of GIS data, budget data, and recommendations has been assembled to direct buffer site identification and implementation.
- This project has received media exposure and was featured in a newspaper article in the Quad City Times on August 26, 2009.
- Mailings about the project were disseminated to residents along Duck Creek and five educational workshops/presentations discussing watershed degradation and improvement were conducted.
- Mailings offering free water monitoring test kits and asking for collaborative participation in water testing were sent to Duck Creek riparian property owners in Davenport and Bettendorf; 29 water monitoring test kits were distributed to Bettendorf Boy Scouts and one to a Duck Creek property owner.
- 9.68 acres of buffers have been put in the ground in place of mowed turf grass; approximately 1.5 acres are planned to be installed in Davenport in Spring 2011; an additional 5-10 acres are in the planning stages to be installed in Bettendorf in Spring 2011. We anticipate installing approximately 16-21 acres of buffers through the program.

Project Name: Duck Creek Watershed Storm Water Drainage and Conveyance Improvements
Project Sponsor: City of Davenport
Length of Project: April 15, 2010 to July 1, 2013

Counties included in the project area: Scott

Total Watershed Improvement Funds awarded for this project: \$400,000.00
Total Watershed Improvement Funds spent: \$ 0.00
Total Watershed Improvement Funds obligated: \$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$400,000.00

Project objectives:

- Administer the St. Ambrose University Storm Water Drainage and Conveyance Improvements Project to ensure all objectives and activities planned are implemented.
- Install practices to decrease frequency and magnitude of flooding on St. Ambrose University campus and downstream properties by detaining storm water and promoting infiltration.
- Capture and treat 3.5 acre-feet of storm water runoff, improving the water quality within Duck Creek.
- Increase public awareness and knowledge of water quality and quantity issues to watershed residents and the local community

Summary of accomplishments and water quality outcomes

To date, MSA Professionals has been hired by St. Ambrose University to complete the design of the watershed improvement features as designated in the Grant Agreement. MSA has surveyed the existing topography of the project area. Multiple coordination meetings have been held with representatives of MSA, St. Ambrose University and the City of Davenport Public Works Department.

The underground detention/infiltration system below the Cosgrove Hall parking area has been sized to capture and treat 3.5 acre-feet of storm water runoff (the 10-year storm volume). The storm sewer downstream of the underground detention system has been designed as well as the excess storm water passageway for events larger than the 10-year event. This excess storm water passageway is designed through the St. Ambrose University Campus. The new layout of the Cosgrove Hall parking lot has been designed with the incorporation of sustainable water quality practices.

The bid documents are at approximately 80-percent complete with additional coordination meetings scheduled in the upcoming month.

Project Name: East Okoboji Beach
Project Sponsor: Dickinson Soil and Water Conservation District
Length of Project: February 1, 2009 – January 31, 2012

Counties included in the project area: Dickinson

Total Watershed Improvement Funds awarded for this project: \$386,000
Total Watershed Improvement Funds spent: \$336,117
Total Watershed Improvement Funds obligated: \$38,600
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$11,283

Project objectives:

- Construct over 50 LID practices along a street reconstruction project
- Monitor water quality before, during, and after LID practice construction
- Conduct an information and education campaign that shows the value of LID

Summary of accomplishments and water quality outcomes

This project was broken down into three phases the first two phases were completed in 2009 with only phase three left to be completed in 2010.

Phase 3

Infiltration based storm water practices were installed throughout the summer of 2010. The practices including bio-swales, enhanced swales, bio-cells and rain gardens were installed following the street construction that ended by late summer of 2010. By the end of the construction season of 2010 all the practices were installed, planted, and had the proper sediment and erosion materials in place to over winter the practices. The spring of 2011 will have all the plants growing and water monitoring will continue to show improvements to water quality on the site.

Water Monitoring

Water monitoring was continued in April 2010 after the road work was completed but none of the infiltration based practices were installed. Water monitoring for Total Suspended Solids (TSS) continued through 2010 with the addition of nitrogen and phosphorus to the sampling. Using an adjacent subdivision as the control for the monitoring at East Okoboji Beach we found by the October 2010 reductions in comparison from the beginning of the project and the control site. All monitoring efforts showed reductions of nutrients and total suspended solids giving us an initial positive impact on water quality. An example is the total suspended solids at East Okoboji Beach was as high as 4200 parts per million (ppm) at the same time the control site was 320 ppm. In August 2010, following the installation of the storm water practices with only some minor finishing work being completed the East Okoboji Beach TSS was at 160 ppm and the control site was at 150 ppm. This shows a major reduction shortly following installation of practices and we expect to see a continued reduction in the monitoring that will continue into 2011.

2010 Watershed Improvement Fund Annual Project Progress Report
Project Name: Fox River Water Improvement Project
Project Sponsor: Fox River Ecosystem Development Board
Length of Project: January 1, 2010 to December 31, 2014

Counties included in the project area: Appanoose and Davis

Total Watershed Improvement Funds awarded for this project:	\$ 493,750.00
Total Watershed Improvement Funds spent:	\$ 84,147.17
Total Watershed Improvement Funds obligated:	\$ 131,014.20
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 278,588.63

Project objectives for calendar year 2010:

- Administer the Fox River Ecosystem Improvement Project to ensure all objectives and activities planned are implemented.
- All practices will be installed into priority areas within the impaired segment of the Fox River addressing sediment delivery reductions to the Fox River.
- Construct 10 grade stabilization structures controlling sediment delivery from 350 acres entering the Fox River.
- Construct 10 water and sediment control basins controlling sediment delivery from 50 acres of pasture and cropland.
- Construct 6,000ft of terraces to control sediment delivery from 120 acres of cropland.

Summary of accomplishments and water quality outcomes:

- WIRB Coordinator, Craig Foster and field office staff administered all projects to ensure objectives and activities planned were implemented.
- Construction is completed on 7 grade stabilizations structures controlling 378.5 acres and reducing sediment delivery by 962t/y.
- Construction is completed on 22 water and sediment control basins that are controlling 112.5 acres and reducing sediment delivery by 315t/y.
- Construction is completed on 3,455ft. of terrace that are controlling 78.9 acres and reducing sediment delivery by 184 t/y.
- Fox River Watershed received the Conservation Districts of Iowa "Outstanding Watershed Award" in 2010.

Due to a wet spring and summer, contractors had a tough time implementing projects around the watershed, but when weather turned around in the fall, projects started to get completed. With the dry fall, crops came out early and quick, contractors were swamped with more work than they could complete. Later finding tile became a problem with other projects that need completed.

Project Name: Hawthorn Lake Watershed Project
Project Sponsor: Mahaska County Soil and Water Conservation District
Length of Project: January 1, 2010 to December 31, 2013

Counties included in the project area: Mahaska

Total Watershed Improvement Funds awarded for this project: \$360,900.00
Total Watershed Improvement Funds spent: \$ 11,932.43
Total Watershed Improvement Funds obligated: \$100,000.00
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$248,967.57

Project objectives:

- Administer Project and Implement all Activities and Objectives in the Hawthorn Lake Watershed Project
- Conduct outreach activities that will provide opportunities for the general public, lake users, and rural landowners to gain a better understanding of water quality and their influence on water quality.
- Target best management practices within the watershed to reduce the delivery of sediment and phosphorus from sheet, rill, and gully erosion by 1974 tons and 2567 lbs respectively.
- Implement in-lake management strategies that will reduce shoreline erosion and sediment delivery by 379 tons and 493 pounds respectively and control invasive species such as carp and shad, improve fish habitat, and provide better fishing opportunities to the public.

Summary of accomplishments and water quality outcomes:

The Mahaska Co. SWCD held a kick-off meeting on May 26, 2010. The meeting held at Smokey Row in Oskaloosa, Iowa was attended by 34 landowners, stakeholders, staff, commissioners, news media, etc. Cindy Davis (Coordinator) and Mark Flammang (DNR) presented the group with information about the Hawthorn Lake Restoration project and how the project will improve water quality within the lake. The event was covered by the Oskaloosa Herald with an article in the local newspaper. Articles regarding the restoration were published in three local newspapers and the DNR website.

The 1st Annual Partners meeting was held November 29, 2010 at Mahaska Co. SWCD office, with 12 partners in attendance. Partners discussed shoreline work, the nine proposed structures on public property, progress on private property, fish renovation and signage. On December 14, 2010 a shoreline contractors' meeting was held with 7 in attendance, 5 partners and 2 contractors. Shoreline in-lake management strategies will reduce shoreline erosion by 379 tons and sediment delivery by 493 pounds. Cultural resources review on the shoreline was conducted in July of 2010.

DNR completed a fish rescue, taking the rescued fish to two other Iowa lakes. Lake drawdown began on June 10, 2010. DNR and the watershed coordinator checked all ponds within the watershed for invasive species, finding none. On November 2, 2010 DNR did a partial fish kill of the lake, eradicating everything on the east arm of the lake.

Project Name: Hewitt Creek Watershed Improvement Project
Project Sponsor: Hewitt Creek Watershed Improvement Association, Inc.
Length of Project: January 1, 2010 to December 31, 2014

Counties included in the project area: Dubuque

Total Watershed Improvement Funds awarded for this project: \$482,035
Total Watershed Improvement Funds spent: \$ 80,825
Total Watershed Improvement Funds obligated: \$ 36,770
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$364,440

Project objectives:

- Increase watershed cooperator participation rate to 85% and encourage utilization of conservation programming.
- Improve watershed agronomic and economic performance measures.
- Reduce pollutant delivery to Hewitt Creek.
- Conduct a water monitoring program to document changes in water quality parameters.
- Administer the Hewitt Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.

Summary of accomplishments and water quality outcomes

The Hewitt Creek Watershed Improvement Project is a continuation of a project that first received WIRB funding from January 2006 through December 2008. The performance-based incentive program was improved to attract new cooperators and promote continual environmental improvement through the implementation of conservation BMPs. Two new cooperators participated in 2010, increasing total participation to 70% of watershed operators. Primary performance measures are the Phosphorus Index (PI), Soil Conditioning Index (SCI) and cornstalk nitrate test (CNT). Thirty-four cooperators completed index calculations, with 13 farms improving PI scores and 4 farms improving SCI scores. Improvements in PI scores are directly attributed to 14,210 feet of grassed waterways that were installed or improved in the watershed. Sediment delivery to Hewitt Creek was reduced by 809 tons/year through seeding grassed waterways, cover crops and rotational pastures. Phosphorus delivery was reduced by 1,058 pounds/year.

Twenty cooperators conducted CNT sampling; with 11 farms achieving CNT averages less than 1,300 ppm NO₃-N (within the optimal range of 700 to 2,000 ppm). The watershed average CNT of 1,976 ppm is 44% lower than the 2006 average of 3,512 ppm.

An intensive water monitoring program continued for the sixth year. The Family Biotic Index (FBI), a measure of the quality and quantity of macroinvertebrates, was 4.74 (good) in 2010, compared to 5.83 (fairly poor) in 2005. The FBI has gradually improved since 2008 and currently meets the council's stated goal of a FBI of 5.00.

The council partnered with the Dubuque and Delaware SWCDs, the Coffee Creek Watershed Improvement Association, and Iowa State University Extension successfully to receive a Mississippi River Basin Initiative grant that will bring \$5.4 million of cost-share to three subwatersheds of the North Fork Maquoketa River above Dyersville.

Project Name: Hurley Creek/McKinley Lake Watershed Improvement Project
Project Sponsor: City of Creston
Length of Project: March 1, 2008 to February 28, 2011

Counties included in the project area: Union County

Total Watershed Improvement Funds awarded for this project: \$117,500.00
Total Watershed Improvement Funds spent: \$72,932.27
Total Watershed Improvement Funds obligated: \$0.00
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$44,567.73

Project objectives:

1. Administer the Hurley Creek/McKinley Lake Watershed Improvement Project and work with all stakeholders to ensure all project objectives are implemented as scheduled.
2. Reduce by at least 50% the amount of annual erosion, which will help reduce sediment Load, loss of property, and may improve water quality.
3. Reduce E. coli levels to meet designated use of McKinley Lake by controlling direct animal access, reducing animal waste runoff, and improving sanitary sewer systems.
4. More effectively manage the storm water flow rate, which may reduce erosion and flooding any may improve water quality. Reduce stormwater flow into Hurley Creek by at least 35%.
5. Educate the public, including civic groups, homeowners, farmers, and business owners in the Hurley Creek Watershed about Best Management Practices and establish comprehensive education and communications strategies to promote environmental awareness.

Summary of accomplishments and water quality outcomes

Assisted property owners in the watershed install 2,770 feet of riparian buffer strips in an urban setting. Assisted property owners in the watershed install 950 feet of riparian buffer strips in a rural setting. Four streambank stabilization projects along Hurley Creek were completed for a total of 506.6 feet. These projects will reduce sediment delivery by 135 tons of soil annually and reduce phosphorus by 176 pounds annually. Assisted two property owners with the installation of livestock crossings. These crossing will limit access to the stream channel. The city has repaired, replaced or slip lined more than 23,192 feet of sanitary sewer lines and have replaced or repaired more than thirty sewer manholes in the northeast part of town. These improvements help to reduce inflow and infiltration in to our sanitary sewer system. The improvements around the McKinley Lake and Hurley Creek areas has heightened community awareness on water quality and now have an annual cleanup week where our schools and community groups work together to remove trash from the creek and lake. Several rain gardens were planted to provide water quality benefits. Worked with a local workshop to manufacture and market rain barrels locally. This was great project for Creston and we have identified our next watershed improvement project and work is started. This was truly a successful community endeavor.

Project Name: Creative Solution for Indian Creek Water Quality
Project Sponsor: City of Fairfield
Length of Project: December 15, 2010 – February 28, 2012

Counties included in the project area: Jefferson

Total Watershed Improvement Funds awarded for this project: \$ 33,000
Total Watershed Improvement Funds spent: \$ 0
Total Watershed Improvement Funds obligated: \$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 33,000

Project objectives:

- Administer the *Creative Solution* Project to ensure all objectives and activities planned are implemented.
- Install pipes and hydraulic pump to move water from the retention pond to the CEMS plan into holding tanks. Install pipes to move discharged coolant water to the retention pond.
- Reduce the volume of stormwater entering Indian Creek by approximately 930,000 gallons of water on an annual basis and reduce demand from municipal water supply by approximately 500,000 gallons annually.
- Increase public awareness at the local, regional, and state level how this model project demonstrates how a business can install infrastructure to treat stormwater as a valuable resource instead of a waste product while also working towards financial sustainability.

Summary of accomplishments and water quality outcomes

As a consequence of the WIRB grant being awarded, the City of Fairfield and Creative Edge Master Shop (CEMS) have been working in tandem setting in motion all the necessary steps required to accomplish the goals set forth in the grant. CEMS has been in contact with the engineer who will be designing the system as well as with the city-wide Sustainability Coordinator.

Various staff at CEMS are analyzing their department needs in order to help configure the best possible system. CEMS has had discussions with the adjoining landowner who is 100% supportive of allowing the storm water to travel in underground pipes on their land to discharge into the Storm Water Management lake that was built for just such a purpose.

Finally, the both the City's Water Department and Waste Water Management teams are aware of this plan which will lower the burdens put on their respective infrastructure.

Project Name: Indian Springs Pond Watershed
Project Sponsor: Allamakee Soil and Water Conservation District
Length of Project: January 1, 2010 – December 31, 2012

Counties included in the project area: Allamakee

Total Watershed Improvement Funds awarded for this project: \$201,660

Total Watershed Improvement Funds spent: \$ 35,776

Total Watershed Improvement Funds obligated: \$ 0

Watershed Improvement Fund unobligated balance as of 12/31/2010: \$165,884

Project objectives:

- Minimize storm water runoff into Indian Springs Pond, sinkholes, and the stream.
- Reduce livestock stream-use by 40%.
- Reduce sediment loading of the stream and Indian Springs Pond by 3,170 tons.
- Educate the public about watersheds, karst topography, and conservation practices.
- Continue water quality monitoring of the watershed.

Summary of accomplishments and water quality outcomes

The Allamakee SWCD started the Indian Springs Pond Watershed project in 2010. A total of \$4,019.48 in WIRB funding, \$10,144.08 in federal EQIP funding, and \$4,750.03 landowner dollars have been spent thus far for best management practices (BMPs) in the watershed. The BMPs that have been implemented will prevent an estimated 120 tons of sediment and 156 pounds of phosphorus from reaching the Indian Springs Pond annually. In addition, 16,217 gallons of water will be detained by rain barrels to reduce the amount of storm water that enters the stream and pond.

A total of 2,650 feet of terraces, one grade stabilization structure, and 17.6 acres of improved grazing management were planned for this year. One of the proposed terraces was built as a sediment basin due to having a large drainage area, and therefore only 1,900 feet of terraces were installed. The 17.6 acres of improved grazing management included rotational grazing, a watering facility and waterline, and a heavy use protection area. Four landowners installed rain barrels. Several landowners have shown interest in terraces and sediment basins and are expected to sign up before the EQIP deadline.

A rain garden has been designed for the Waukon City Park to be installed in 2011. The city council has agreed to pay for water sampling between March and November of 2011. The city of Waukon also received a REAP grant this year to convert a park addition back to oak savanna, conduct timber stand improvement in the park, and install a recreational trail. These two grants will work in conjunction to educate the public through trail signs and to improve land management in the park.

This project emphasizes education and outreach. An introduction letter was sent to all of the landowners in the watershed at the start of the year and was followed with an informative letter about rain barrels. An informational meeting was held with members of the community before a city council meeting regarding urban and rural conservation practices. Several articles were also published in the local newspaper and SWCD annual report regarding the watershed project and practices.

Project Name: Keg Creek Watershed
Project Sponsor: Regional Water Association
Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Mills

Total Watershed Improvement Funds awarded for this project: \$ 500,000
Total Watershed Improvement Funds spent: \$ 500,000
Total Watershed Improvement Funds obligated: \$ -0-
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ -0-

Project objectives:

- To administer the Keg Creek watershed Improvement Project to ensure all objectives and activities planned are implemented
- Construct a community wide collection system to transport the sanitary sewage to a proposed wastewater treatment facility. Collection system will eliminate an estimated total of 74 septic systems and the associated pathogenic bacteria discharges to the watershed. During construction 10 additional septic tanks were discovered and removed
- Construct a municipal wastewater treatment facility to reduce pollutants in the Keg Creek Watershed, including 10,220 lb/year of BOD, 9,760 lb/year of suspended solids, and a large amount of bacteria, viruses, and other pathogenic organisms each year
- Conduct an information and education program to increase awareness and knowledge of Keg Creek water quality issues to the local community and County officials

Summary of accomplishments and water quality outcomes

Previously, the community of Mineola had non-conforming, on-site septic tanks for waste treatment. The effluent from these systems drained into field tile. Only a few properties utilized drain-fields. Therefore, sewage discharge went directly into the Keg Creek watershed. Many lots were too small and would not have provided proper space separation distances between private wells and septic systems. This endangered the health, safety, and welfare of the well users as well as contaminating Keg Creek. As a result, a newly constructed wastewater collection and treatment facility is in place which eliminated approximately 83 on-site septic systems to provide a safer, cleaner waterbody. With the addition of the treatment system, the current previous high levels of bacteria and nutrients will decrease, resulting in a watershed that is not only more attractive to animal and plant life, but also provided safe drinking water and recreational opportunities to human users.

Project Name: Kettle Creek Urban Watershed Improvement Project

Project Sponsor: City of Ottumwa

Length of Project: March 16, 2009 to March 2, 2012

Counties included in the project area: Wapello

Total Watershed Improvement Funds awarded for this project:	\$387,996.00
Total Watershed Improvement Funds spent:	\$289,711.49
Total Watershed Improvement Funds obligated:	\$ 98,284.51
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$0

Project objectives:

- Administer the Kettle Creek Urban Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Construct bank protection in 6 areas (815 feet total) and 6 stream stabilization check dams within the urban portion of Kettle Creek.
- Reduce urban sediment delivery to the outlet of Kettle Creek by 300 tons per year.
- Conduct an information and education program to increase awareness and knowledge of Kettle Creek water quality issues to watershed residents, city park users, and the local community.

Summary of accomplishments and water quality outcomes

2010 was a year of significant progress for the Kettle Creek Urban Watershed Improvement Project.

The City of Ottumwa and their engineering consultant, Veenstra & Kimm, Inc. (V&K) completed selection of sites most in need of sediment control and final design of the project features.

Griggs Environmental Strategies LLC (GES) completed a wetland/Section 404 investigation and protected species assessment for potential Indiana bat impacts (May). In addition, GES managed a subcontract for a Phase IA cultural resources investigation completed by Wapsi Valley Archaeology (September).

GES received training from Iowa Department of Agriculture and Land Stewardship staff on performing sediment delivery calculations and subsequently completed pre-project sediment delivery assessments for each structure site (September).

On September 29th, a contract was awarded to DeLong Construction to complete the structure work. Site work began in early October and was nearly complete by the end of the year. Completion of all site work is expected in early 2011.

Project Name: Lake Colchester Middle Creek
Project Sponsor: Lakewood Village Association
Length of Project: July 2, 2007 – July 5, 2010

Counties included in the project area: Warren

Total Watershed Improvement Funds awarded for this project:	\$ 247,500.00
Total Watershed Improvement Funds spent:	\$ 244,914.74
Total Watershed Improvement Funds obligated:	\$ 00.00
Watershed Improvement Fund unobligated balance as of 7/5/2010	\$ 2,585.26

Project objectives:

- Manage fish population for biomanipulation principles for water quality.
- Create habitat alterations based on biomanipulation principles for water quality.
- Improve inlet sediment and nutrient control practices to benefit lake water quality.
- Monitor the lake water quality and augment algae control with lake circulation technology.

Summary of accomplishments and water quality outcomes

Two significant factors negatively impacted the project. Two major flood events (June, 2008 and June, 2010) combined with heavier than normal rainfall, and availability of matching funding until the last nine months of the project. Project was completed and paid by July 2.

Engineering, permitting, easements, advertisements were completed as required by Iowa Statutes by Foth Engineering for the excavation of silt from the West Inlet. Four bidders responded to the construction bid with Corell Construction the low bidder at \$167,232.52. Project of removal of 6,174 CY of silt was completed at the West Inlet May, 2010. This included excavation, disposal, site restoration, stabilization and permit close-outs filed.

Fish: 2,424 additional pounds rough fish utilizing shocking, bow/arrow, rod/reel, cast netting were removed. Game fish stocking added 700 Bass, 400 Walleye, 100 Northern. Fifty (50) additional fish habitat structures were added in deeper water and GPS-mapped.

One additional (4 total) lake circulator (SolarBee) was purchased and installed in the lake in June, 2010. All four circulators are currently, successfully operational.

525 additional aquatic vegetation plants were started in custom-made exclosures in various areas. Two nursery areas created; numerous cattail and arrowhead transplanted from thriving areas at Beardsley Bay. Several eroded areas of shoreline and/or watershed were stabilized and planted with these starts, as well. All areas are thriving with seeds and pods also being harvested for 2011.

On-going, monthly water quality monitoring show Secchi depths improvements to 24-36".

Project Name: Lake Morris Water Quality Improvement Project
Project Sponsor: Lucas Soil and Water Conservation District
Length of Project: January 1, 2009 to December 31, 2011

Counties included in the project area: Lucas

Total Watershed Improvement Funds awarded for this project: \$462,375.00
Total Watershed Improvement Funds spent: \$ 0
Total Watershed Improvement Funds obligated: \$ 67,062.17
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$395,312.83

Project objectives:

- Administer the Lake Morris Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Improve water quality for raw water intake at Chariton Water Department Intake. Goals are to reduce pH maximums from over 9.0 to 8.0 and turbidity monthly average from 2008 yearly average of 15 ntu (nephelometric turbidity units) to 10 ntu.
- Reduce sediment delivery to Lake Morris by 661 tons of sediment. This equates to reducing 75% of the assessed sediment loading directly from city owned property surround Lake Morris. Installation of three grade stabilization and 15 water and sediment control basins will achieve this goal.
- Conduct an information and education program to increase awareness and knowledge of Lake Morris water quality issues to city residents, lake users, and the local community.

Summary of accomplishments and water quality outcomes

All Semi-Annual and Annual Reports have been submitted in a timely fashion. Project Coordinators meetings attended were in Ames and in Marshalltown; on 6/22 and 11/17 ledger trainings were held with Jerry Nepel. Sediment Delivery training was received. Quarterly progress reports to the Advisory Committee were given informing of the project's progress.

One landowner was obligated cost-share to build a water and sediment control basin. Another landowner expressed interest in cost-share for terraces, which is in the process of a WIRB amendment. Chariton Water Department provides a monthly water quality report concerning turbidity, alkalinity, hardness, ammonia, and minerals as well as a Total Organ Carbon report. NRCS Engineering from Creston designed one grade stable and seven water and sediment basins on the East side of the lake. A bid letting of the East side designed structures was held. Construction of these structures is scheduled to be completed by June 1, 2011. Tentatively designed are centerlines for seven water and sediment basins for the Lake's West side.

Lucas SWCD included an article in their annual newsletter mailed to 1,200 Lucas County landowners the project's SolarBees. Reported that water quality has become more consistent at the raw water intake and BMP's were planned for the coming year. A table in the Open Class Building at the Lucas County Fair featured a Lake Morris map containing proposed BMP's. People asked about the SolarBees and were informed of their purpose. Several people were interested in having the land around the lake improved.

Project Name: Little River Lake Watershed
Project Sponsor: Decatur Soil and Water Conservation District
Length of Project: January 1, 2010 - December 31, 2012

Counties included in the project area: Decatur

Total Watershed Improvement Funds awarded for this project: \$423,900.00
Total Watershed Improvement Funds spent: \$113,052.31
Total Watershed Improvement Funds obligated: \$ 80,909.66
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$229,938.03

Project objectives:

- Conduct geographic information system (GIS) analysis, water quality monitoring, and watershed outreach activities to support the application of BMPs for priority land in the Little River Watershed.
- Assist landowners to apply best management practices (BMPs) for priority land in the Little River Watershed.
- Perform all project administrative requirements as per Grant agreement and approved application.

Summary of accomplishments and water quality outcomes

The Decatur County Soil & Water Conservation District (District) and partners used geographic information system (GIS) analysis and field evaluations to identify areas of priority land that is owned by 76 landowners in the Little River Lake Watershed. The District worked in partnership with Iowa DNR and the Hygienic Laboratories to conduct pre-implementation water monitoring that will be used as a base line with future water monitoring after the majority of practices have been completed to accurately record reductions in sediment and phosphorous delivery. The District's outreach efforts focused on personal contacts with the landowners who own land in priority areas. Outreach activities also included public displays of project goals, plans and implementation. District partners have completed activities related to water quality monitoring and savanna habitat restoration.

The District has assisted 38 landowners in planning and 22 landowners in applying best management practices on priority land. Practices planned and applied by landowners include terraces, grade stabilization structures, water & sediment control basins and prescribed grazing systems. The District continued to contact landowners in high priority areas to help them evaluate the need for, and benefits of, applying practices to the land they own.

The District and partners continued to work with the project's team of experts to plan, carry out and assess activities. The District and team members regularly reviewed progress in project implementation. The District submitted the required project progress reports and financial ledgers in a timely manner.

Project Name: Lost Creek Watershed
Project Sponsor: Lee Soil and Water Conservation District
Length of Project: January 1, 2010 – December 31, 2013

Counties included in the project area: Lee

Total Watershed Improvement Funds awarded for this project: \$ 445,800
Total Watershed Improvement Funds spent: \$ 14,838
Total Watershed Improvement Funds obligated: \$ 50,000
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 380,962

Project objectives:

- Install BMPs in the watershed that target areas contributing sediment at a rate of one ton or more per acre per year to Lost Creek
- Limit livestock access to the stream by one half, reducing stream bank erosion and limiting bacterial contamination of the water body
- Implement an information and education campaign for Lost Creek Watershed

Summary of accomplishments and water quality outcomes

- One Grade Stabilization Structure surveyed, designed, and ready for construction – ten other applications received and sediment delivery calculated
- 7.6 acres of CRP buffers completed - sediment reduced by 7 tons and phosphorous reduced by 9.1 pounds
- 54.5 acres of continuous CRP completed - sediment reduced by 88 tons and phosphorous reduced by 114.4 pounds
- Tile outlet terraces installed protecting 37 acres - sediment reduced by 135 tons and phosphorous reduced by 175.5 pounds
- 105 acres of Prescribed Grazing applied – sediment reduced by 40 tons and phosphorous reduced by 52 pounds
- 8 roadside signs and 8 bridge signs installed to identify Lost Creek Watershed
- Field day was held concerning buffer strips – approximately 60 people in attendance
- 2 press releases to raise public awareness
- Monitoring of water transparency by local secondary school teacher and students in conjunction with IOWATER personnel

Project Name: Lost Island Lake Watershed
Project Sponsor: Palo Alto County Conservation Board
Length of Project: August 27, 2010 – December 31, 2011

Counties included in the project area: Palo Alto County

Total Watershed Improvement Funds awarded for this project:	\$180,000
Total Watershed Improvement Funds spent:	
Total Watershed Improvement Funds obligated:	
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$180,000

Project objectives:

- Administer the Lost Island Lake Watershed Improvement Project.
- Common Carp Population Control and Wetland Restoration.
- Conduct educational and informational activities to keep the project partners and the public informed.

Summary of activities and accomplishments for calendar year 2010

Ducks Unlimited, Inc. provided final engineering designs and construction plans for fish barriers, water control structures and channel cleanouts at Lost Island Lake. The Lost Island Lake restoration project was approved by the Natural Resources Committee meeting on October 14, 2010. The DNR solicited and negotiated a price of \$787,000.00 with Landwehr Construction, Inc. (St. Cloud, MN). Landwehr Construction, Inc. is under contract and began construction November 2010. As of December 2010, Landwehr has installed the Blue Wing, DU Marsh, and Barringer Slough water control structures and fish barriers and had completed several necessary draw down channels.

Commercial harvest continues during the winter of 2010/2011. Not including the most recent effort – common carp only - 326,486 lbs. have been harvested. The subsidy structure was set up to provide incentive to harvest 400,000 lbs during the first year. With the harvest currently occurring (and before end of contract Jan 22nd) we anticipate the goal will be met. DNR put in place an extension to harvest an additional 150,000 lbs before May 26th at no additional cost to DNR.

The Palo Alto County Conservation Board, Lost Island Protective Association and the Iowa DNR hosted a public meeting at the Lost Island Prairie Wetland Nature Center to inform the public on the Lost Island Lake Restoration Project. A PowerPoint presentation was given and several speakers from the local and state level spoke. Updates on the Lost Island Lake Restoration Project were published in our quarterly newsletter. Publications on the project were printed in the Sioux City Journal, Ruthven Times, and Spencer Daily Reporter.

A brochure was done and sent out in September informing community citizens on the Water Quality Restoration Project. Brochures were also given out to local businesses. These brochures are attached to this report. The Palo Alto County Conservation Board wrote an article on project updates in the Winter Newsletter. A large four panel, lighted display was developed for public viewing at the Lost Island Prairie Wetland Nature Center.

Project Name: Ludlow Creek Watershed Project
Project Sponsor: Allamakee County Soil and Water Conservation District
Length of Project: January 1, 2009 - December 31, 2011

Counties included in the project area: Allamakee, Winneshiek.

Total Watershed Improvement Funds awarded for this project: \$496,300
Total Watershed Improvement Funds spent: \$246,819
Total Watershed Improvement Funds obligated: \$ 43,505
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$205,976

Project objectives:

- Reduce sediment loading of Ludlow Creek by 40%.
- Reduce animal waste run-off by 40%.
- Address the water quality impact that sinkholes have on the watershed.

Summary of accomplishments and water quality outcomes

In 2010, the Allamakee County SWCD continued water quality improvement efforts in the Ludlow Creek watershed. A total of \$133,066 in WIRB funding, \$280,181 in federal EQIP funding, \$2,455 Allamakee County dollars, and \$124,496 landowner dollars were utilized to implement best management practices (BMPs) in the watershed. The BMPs that have been applied will treat an estimated 866 acres, and will prevent a projected 3,235 tons of sediment and 4,206 pounds of phosphorus (P) from reaching Ludlow Creek annually.

With the goal of reducing sediment loading of Ludlow Creek by 40%, the project worked with landowners/producers to install a total of five grade stabilization structures and 26,435 ft. of terraces in 2010. These BMPs will trap approximately 3,093 tons of sediment and 4,021 pounds of phosphorus contained in 812 acres of surface run-off. A total of 19.4 additional acres of grassed filter-strips and 9 acres of pasture management were also implemented which will reduce sediment loading by 142 tons and phosphorus loading by 185 pounds.

The Ludlow Creek Watershed Project took a big step towards a 40% animal waste run-off reduction by working with a producer to install a concrete pit and ramp system with secondary containment that will store 155,480 cubic feet of manure from a 240-head dairy. The landowner's previous system only allowed for one month of manure storage, however, the new system will provide six months of storage and will allow for more efficient manure management. A certified nutrient management plan (CNMP) was developed by NRCS staff to provide the landowner with manure management and application guidance. This complete manure management system will prevent roughly 1,840 pounds of phosphorus from reaching Ludlow Creek.

Landowner outreach continued to be a big part of the project's water quality efforts in 2010. An annual newsletter, along with two separate post-card announcements regarding the CRP and EQIP sign-ups, were mailed to landowners/producers. Thirty email publications containing agricultural and conservation information were also forwarded to landowners/producers on the project's email list.

Project Name: Lytle Creek Watershed Improvement Project
Project Sponsor: Limestone Bluffs RC&D Area, Inc.
Length of Project: December 1, 2009 to June 30, 2012

Counties included in the project area: Jackson

Total Watershed Improvement Funds awarded for this project:	\$ 391,752.76
Total Watershed Improvement Funds spent:	\$ 12,744.78
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 379,007.98

Project objectives:

- Administer the Lytle Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Secure necessary agreements, contracts, and administrative services to move project forward to construction.
- Construct a wastewater collection and treatment system for the un-incorporated community of Leisure Lake to reduce nutrient and bacteria impairments to Lytle Creek, the Maquoketa River, and local groundwater sources.

Summary of accomplishments and water quality outcomes

The Design is complete and we have a construction permit from Iowa Department of Natural Resources in hand; the Environmental Assessment process is done; and negotiations for the treatment site and the access road have been completed. In order to proceed, EIRUSS needs a "Letter of Conditions" from the USDA. The USDA says they don't have their appropriation from Congress and are unable to issue the "Letter" at this time. Without this letter, EIRUSS cannot obtain the interim financing necessary to pay for the land and pay contractors during construction. At such time as the letter is received EIRUSS will proceed to bid the project.

Project Name: Miller Creek Water Quality Project
Project Sponsor: Monroe County Soil and Water Conservation District
Length of Project: April 1, 2010 to December 31, 2013

Counties included in the project area: Monroe

Total Watershed Improvement Funds awarded for this project: \$ 255,300.00
Total Watershed Improvement Funds spent: \$ 33,994.40
Total Watershed Improvement Funds obligated: \$ 81,122.77
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 140,182.83

Project objectives:

- Produce GIS maps showing priority areas and identify 21 landowners within those priority areas.
- Send out letters to landowners in priority areas to inform them about WIRB projects and available technical and financial assistance.
- Complete Sediment delivery calculations on 10 sites.
- Place news articles in appropriate venues to increase knowledge of Miller Creek water quality issues to the general public.
- Attend appropriate training as the Watershed coordinator.

Summary of accomplishments and water quality outcomes:

- In March, 2010, GIS maps were produced for 3,800 acres of priority areas in the watershed. Informational letters and maps were sent to landowners.
- 12 Gully assessments were performed resulting in money being allocated for 7 grade stabilization structures.
- 35 Basin locations were identified and 7 built.
- 6,520 feet of terraces was identified with 1,900 feet being built.
- 96 acres of crop ground has been enrolled in the Conservation Reserve Program. The seeding, to be established in the spring of 2011 and will potentially reduce erosion by 110 tons per year. Phosphorus will be reduced by 143 lbs per year.
- Of the 3,837 priority acres, 131 acres have been controlled, resulting in a reduction of 196 tons of sediment and 254 lbs of phosphorus flowing into the Miller Creek watershed.

Miller Creek presented a unique issue in a soil series named Munterville. This soil series is riddled throughout with a rocky shaley layered rock that makes building structures particularly difficult. To find suitable building sites for grade stabilization structures one has to look in the upper reaches of the watershed in the Clinton, Gara and Ladoga soils. Rain hampered construction during the summer and early fall. However, fair weather allowed construction to begin in crop fields on basins and terraces, and pushed structure construction back to a winter and spring layout time frame. In spite of these difficulties the Miller Creek project has progressed with ever increasing interest from landowners. With all of the WIRB basin and terrace cost share funds allocated, I am promoting EQIP, CRP, REAP and WHIP to help fund other projects.

Project Name: Miners Creek Watershed Improvement Project

Project Sponsor: City of Guttenberg

Length of Project: May 1, 2008 to April 30, 2011

Counties included in the project area: Clayton

Total Watershed Improvement Funds awarded for this project:	\$ 500,000
Total Watershed Improvement Funds spent:	\$ 429,375
Total Watershed Improvement Funds obligated:	\$ 66,305
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 4,320

Project objectives:

- Eliminate the sewage and stormwater runoff from the City of Guttenberg into Miners Creek
- Develop, enhance and preserve 13 acres of wetlands in the Miners Creek riparian zone
- Reduce direct livestock access to Miners Creek by 33%
- Reduce erosion and sediment loading by 25% to Miners Creek using bank stabilization and upland treatment practices

Summary of accomplishments and water quality outcomes

The large-scale sewage outfall redirection and improvement project in the City of Guttenberg has been completed. The two-phase project has eliminated sewage and stormwater runoff from the City of Guttenberg from entering into Miners Creek and negatively impacting water quality in the stream. The sewage outfall and urban stormwater runoff in this small watershed had been previously identified as potential sources of water quality impairments in Miners Creek. Eliminating these sources of impairments will have a positive impact on stream conditions, water quality and aquatic life conditions in Miners Creek. This project also provides an excellent example of ways to effectively reduce urban contributions to water quality impairments.

The City of Guttenberg also completed work to develop and enhance 13 acres of wetlands in the Miners Creek riparian zone. This work resulted in the creation of 3 acres of wetland, the enhancement of an additional 2 acres and the preservation of 9 acres of wetlands along the lower portion of Miners Creek which will improve water quality by filtering chemical and biological contaminants from urban runoff prior to reaching the stream. The wetland complex also allows native vegetation to uptake nutrients from the water to reduce the delivery of nitrogen and phosphorus from Miners Creek to the Mississippi River that ultimately contribute to the Zone of Hypoxia in the Gulf of Mexico. As an added benefit, wetlands restore the natural hydrology of watersheds and increase water holding times to significantly reduce damage caused by flooding.

Landowners in the Miners Creek Watershed have implemented sediment delivery reducing Best Management Practices to reduce erosion and sediment loading into Miners Creek. In the past year over 1000 feet of severely eroding stream bank was stabilized, nearly 5000 feet of terraces were installed on highly erodible land and one sediment basin was installed to reduce erosion and run-off into Miners Creek. These practices, combined with the work the City of Guttenberg completed are improving not only Miners Creek, but also the receiving Mississippi River.

**Name of Project: Muchakinock Creek Watershed Project
Abandon Mine Reclamation
Project Sponsor: Mahaska County Soil and Water Conservation District
Length of Project: January 1, 2009 – January 31, 2012**

Counties included in the project area: Mahaska

**Total Watershed Improvement Funds awarded for this project: \$500,000
Total Watershed Improvement Funds spent: \$255,250
Total Watershed Improvement Funds obligated: \$78,750
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$166,000**

Project objectives:

Reclaim 97 acres of abandon coal mine land on 3 sites in Mahaska County. The names of the sites are Westercamp #2, Harrison and Groenendyk. The reclamation will include site clearing, grading, erosion control structure implementation and seeding the sites with a grass mix.

Summary of accomplishments and water quality outcomes:

Since the beginning date of the project the Westercamp #2 site has been completed. The site is 40 acres located 3 miles southwest of Oskaloosa. The mine spoil piles were graded down and used to fill pit ponds on the site. A large pond was constructed on the site to trap sediment and control downstream erosion. The onsite sediment delivery reduction is approximately 800 tons of sediment per year. The constructed pond on the site protects the downstream channel as well as trapping sediment from 660 acres above the site. The estimated sediment reduction to Muchakinock Creek from the pond is 2795 tons per year. Along with the sediment delivery reduction, the site reclamation work also reduces acidity in the waters on and leaving the site.

The second stage of the project has begun with the start of the Harrison project. The site is 27 acres located 7 miles south of Oskaloosa. As of December 31, 2010 the project is 22% completed. Nearly all of the clearing and site preparation has been completed and 25% of approximately 300,000 cubic yard of excavation has been completed.

Project Name: North Fork Maquoketa River Headwaters Watershed Project
Project Sponsor: Coffee Creek Watershed Improvement Association
Length of Project: July 1, 2008 through June 30, 2011

Counties included in the project area: Dubuque and Delaware Counties

Total Watershed Improvement Funds awarded for this project: \$406,138
Total Watershed Improvement Funds spent: \$285,057
Total Watershed Improvement Funds obligated: \$ 64,326
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 56,755

Project objectives:

- Involve 60% of watershed farm operators in a performance-based incentive program.
- Improve Phosphorus Index and Soil Conditioning Index levels by 15%, reduce cornstalk nitrate test results by 40% and reduce sediment delivery by 7,500 tons per year.
- Reduce nutrient delivery from livestock feedlots within the watershed.
- Provide critical, decision-making information to watershed residents and document the effectiveness of a performance-based approach to benefit the implementation of performance-based incentives in other watersheds.

Summary of accomplishments and water quality outcomes

Total calculated sediment delivery reductions (SDR) to the North Fork Maquoketa Headwaters exceed 8,400 tons per year with the installation and repair of grassed waterways, reduction of tillage through no-till planting, and incorporation of fall cover crops and contour buffer strips. To date, total SDR is 12% greater than the project goal of 7,500 tons per year. Since the project began, 45% of potential cooperators have participated in project activities such as Phosphorus Index and Soil Conditioning Index performance evaluation (31 cooperators), cornstalk nitrate testing (29), grassed waterways (30), farmstead assessment using Farm-A-Syst (21), manure spreader calibration and testing (10), cover crop seeding (8), and grid sampling (7). Cooperators installed or improved 22.4 miles of grassed, receiving \$33,935 in incentives or \$0.28 per linear foot. Cornstalk nitrate testing continued to be a popular component of the project; however, during 2010 fewer samples were collected than the previous 2 years due to an early, rapidly maturing corn crop. Results from corn/soybean rotation fields were 1,541 ppm NO₃-N, 35% lower than 2008. Analyses from continuous corn fields were 2,828 ppm NO₃-N, no change from 2008. The optimal range is 700 – 2000 ppm. Seasonal variation in temperature and precipitation impact annual results because 2009 average results were 35% lower than 2008 and 2010. Through testing cooperators found the importance of a comprehensive database of nutrient inputs, seasonal precipitation and crop yields to evaluate nitrogen performance. Five years of stream sampling of macroinvertebrates shows improved water quality with a Family Biotic Index (FBI) of 4.49 (lower is better). The FBI measures the quality and quantity of macroinvertebrates. There has been steady improvement since 2006, when the FBI was 5.83. A tremendous boost came to the project in 2010 when the council partnered with the Dubuque and Delaware SCWDs and the Hewitt Creek Watershed Improvement Association on a successful Mississippi River Basin Initiative grant that will bring \$5.4 million of federal conservation cost-share to three North Fork Maquoketa subwatersheds above Dyersville.

**Project Name: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2007
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: January 1, 2008 to December 31, 2010**

Counties included in the project area: Clarke, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	\$495,720.00
Total Watershed Improvement Funds spent:	\$378,925.48
Total Watershed Improvement Funds obligated:	\$ 28,300.43
Watershed Improvement Funds unobligated balance as of 12/31/2010:	\$ 88,494.09

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 8,130 tons and 35,980 pounds respectively
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information systems and field work to identify 5,100 acres of priority land owned and/or farmed by 65 landowners in Upper and Lower Dick Creek and Chariton River #4 and #8 targeted sub-watersheds. The Alliance assisted 50 landowners plan best management practices for 2,808 acres. Practices were applied by 35 landowners for 1,360 acres, approximately 700 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 2,632 tons and 14,892 pounds per year respectively. Practices applied included terraces, grade stabilization structures, and water and sediment control basins. The Alliance will continue to assist interested landowners in the targeted sub-watersheds to apply practices beyond the three-year Watershed Improvement Review Board grant agreement period. Alliance partners that committed technical and financial resources to the project will extend this support beyond the three-year period which will enable the Alliance to continue to assist these landowners.

The Alliance's outreach efforts included one-on-one contacts with landowners; recognized six landowners as *Rathbun Lake Protectors* at the 2010 *Protect Rathbun Lake* meeting; interviews of *Rathbun Lake Protectors* with WHO radio; installed *Rathbun Lake Protectors* and *Protect Rathbun Lake* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; displays at the Iowa Water Conference, Water Utility Day, and public events and facilities in the Rathbun Lake area; prepared newsletter for Alliance members and partners; and maintained the Alliance's Internet site at <http://www.rlwa.org/>. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Project Name: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2008
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: February 1, 2009 to January 31, 2012**

Counties included in the project area: Decatur and Wayne

Total Watershed Improvement Funds awarded for this project:	\$245,279.00
Total Watershed Improvement Funds spent:	\$ 64,847.88
Total Watershed Improvement Funds obligated:	\$ 69,785.88
Watershed Improvement Funds unobligated balance as of 12/31/2010:	\$110,645.24

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 2,160 tons and 8,210 pounds respectively
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information system analysis and field evaluations to identify 1,300 acres of priority land that is owned and/or farmed by 16 landowners in the Chariton River #2 targeted sub-watershed. The Alliance assisted eight landowners plan best management practices for 835 acres. Practices were applied by six of these landowners for 291 acres, approximately 150 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 537 tons and 2,041 pounds per year respectively. Practices applied by landowners included terraces and water and sediment control basins. The Alliance continued to contact these and other landowners in the targeted sub-watershed to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included one-on-one contacts with landowners; recognized six landowners as *Rathbun Lake Protectors* at the 2010 *Protect Rathbun Lake* meeting; interviews of *Rathbun Lake Protectors* with WHO radio; installed *Rathbun Lake Protectors* and *Protect Rathbun Lake* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; displays at the Iowa Water Conference, Water Utility Day, and public events and facilities in the Rathbun Lake area; prepared newsletter for Alliance members and partners; and maintained the Alliance's Internet site at <http://www.rlwa.org/>. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Name of Project: Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2009
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: January 1, 2010 to December 31, 2014**

Counties included in the project area: Appanoose, Clarke, Decatur, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	\$491,800.00
Total Watershed Improvement Funds spent:	\$124,078.42
Total Watershed Improvement Funds obligated:	\$173,026.40
Watershed Improvement Funds unobligated balance as of 12/31/2010:	\$194,695.18

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 6,000 tons and 20,000 pounds respectively
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information systems and field work to identify 4,375 acres of priority land owned and/or farmed by 90 landowners in the Lower Chariton Creek, Chariton River #3, Sandy Branch, Hamilton Creek, and Goodwater Creek targeted sub-watersheds. The Alliance assisted 40 landowners plan best management practices for 2,084 acres. Practices were applied by 22 of these landowners for 693 acres, approximately 350 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 1,628 tons and 7,767 pounds per year respectively. Practices applied by landowners included terraces, water and sediment control basins, and grassed waterways. The Alliance continued to contact these and other landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included one-on-one contacts with landowners; recognized six landowners as *Rathbun Lake Protectors* at the 2010 *Protect Rathbun Lake* meeting; interviews of *Rathbun Lake Protectors* with WHO radio; installed *Rathbun Lake Protectors* and *Protect Rathbun Lake* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; displays at the Iowa Water Conference, Water Utility Day, and public events and facilities in the Rathbun Lake area; prepared newsletter for Alliance members and partners; and maintained the Alliance's Internet site at <http://www.rlwa.org/>. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners assembled and worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted the required project plan of work, progress reports, and financial ledgers.

Project Name: Rathbun Lake Special Project: Strategic Use of Sediment Basins
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: November 24, 2010 to October 31, 2014

Counties included in the project area: Lucas and Wayne

Total Watershed Improvement Funds awarded for this project:	\$200,000.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Funds unobligated balance as of 12/31/2010:	\$200,000.00

Project Objectives:

- Assist landowners to construct five sediment retention basins strategically located below areas of priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by an estimated 1,500 tons and 5,000 pounds respectively
- Conduct watershed outreach and water quality monitoring activities to support the construction of sediment retention basins as well as the application of associated best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information system (GIS) analysis and field evaluations to identify 6,800 acres of priority land in the South Fork Chariton River #1, Upper West Jackson Creek, Upper Jackson Creek, Lost Branch, and Chariton River #6 targeted sub-watersheds. Project staff has started to assemble the GIS and field data required to identify and prioritize potential locations for sediment retention basins.

Alliance members and partners initiated coordination with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and staff finalized the Watershed Improvement Review Board grant agreement and prepared the project's comprehensive plan of work. The Alliance submitted the project's plan of work, progress reports, and financial ledger.

In the coming year, Alliance members, partners, and staff will:

- Identify and prioritize potential locations for the construction of sediment retention basins;
- Contact and assist landowners to evaluate, plan, and initiate the construction of sediment retention basins;
- Implement planned watershed outreach activities;
- Carry out water quality monitoring program activities; and
- Prepare and submit project reports and review the project's plan of work, activities, and accomplishments.

Name of Project: Sand Creek Watershed Project
Project Sponsor: Delaware Soil and Water Conservation District
Length of Project: January 1, 2009 to December 31, 2010

Counties included in the project area: Delaware

Total Watershed Improvement Funds awarded for this project: \$ 387,787.00
Total Watershed Improvement Funds spent: \$ 245,147.00
Total Watershed Improvement Funds obligated: \$ 40,250.00
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 102,390.00

Project objectives:

- **Project objectives:** To improve the fisheries aspect of Sand Creek so that it can better serve as a nursery stream for the Maquoketa River, thus improving local recreational opportunities
- To apply streambank protection to 40% of critical areas on Sand Creek (3200' est.)
- To apply grassed waterways, no-till planting, terraces, sediment control basins, and improved nutrient management in the watershed to reduce delivery of sediment and nitrogen by 40%, as well as phosphorous and bacteria, to the stream.

Summary of Accomplishments and Water Quality Outcomes

Since the start of this project, twelve landowners installed 4275' of streambank stabilization at 25 different sites, using WIRB funds and significant EQIP dollars from USDA. 450' of streambank is scheduled to be completed in January 2011 on a critical reach of Sand Creek with WIRB funds. **Sediment savings from the streambank work: 1133 tons annually.**

WIRB funded 16,430' of stand-alone waterways for 13 landowners, **saving 1264 tons of sediment delivery.** In addition, the project utilized funds from the ECP program at FSA to repair 8830' of waterways, and Iowa's IJOBS practice repair program to fix another 9935' of waterways. **Sediment saving from waterway repair money: 936 tons annually.** Landowners also used the Conservation Reserve Program to build 25,250' of new waterways over these 3 years, as well, **with soil savings of 787 tons annually.** In total, over 60,000 feet of waterways were built or brought back up to useful standards through this water quality project. 1250' of terraces were built in 2010, **yielding 10 tons of soil saving.** A Grade Stabilization structure is underway, and scheduled to be completed in early 2011.

Only 212 acres of no-till planting was funded in Sand Creek over the life of the project, **yielding 347 tons of soil saved.** However, the project went to great efforts to raise awareness about no-till planting in this area. Two Soil Quality field days were held with the help of NRCS' Area Soil Scientist; two well-attended no-till informational meetings were held at the County Fairgrounds with assistance from ISU staff and long-time no-tillers from the area; a strip-till field day was held at the farm of a local Iowa Learning Farms cooperator; a no-till newsletter was composed by the coordinator and sent to watershed owners and operators; the cooperator wrote several articles for the county newspaper; and a free-lance writer was employed to write a series of articles featuring no-till, also in the county newspaper.

Projects funded over the 3 year Sand Creek Project reduced annual sediment delivery by 4536 Tons annually.

Project Name: Sands Timber Water Quality Project
Project Sponsor: Taylor Soil and Water Conservation District
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Taylor

Total Watershed Improvement Funds awarded for this project:	\$499,751
Total Watershed Improvement Funds spent:	\$109,217.72
Total Watershed Improvement Funds obligated:	\$234,034.82
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$156,498.46

Project objectives:

- Reduce sediment delivered to Sands Timber Lake by 974 tons.

Summary of accomplishments and water quality outcomes

Thus far in the Sands Timber Watershed 13,758 feet of terrace has been constructed along with five grade stabilization structures. These practices alone reduce sediment delivered to Sands Timber Lake by 1,121 tons per year. This number exceeds our original goal of 974 tons which attests to the fact that practices are being placed in key locations that most benefit the watershed. The general CRP program also benefited the watershed converting 150 acres of row crop production to native grasses. This summer should be an extremely busy one in the watershed. Three structures on private land are scheduled for construction along with two more key structures on public land. Noticeable changes can already be seen in the lake. Comments have been made that the water is clearer than it has ever been.

Project Name: Saylor Creek Sub-Watershed
Project Sponsor: City of Ankeny
Length of Project: October 1, 2008 to September 30, 2010

Counties included in the project area: Polk

Total Watershed Improvement Funds awarded for this project:	\$475,800
Total Watershed Improvement Funds spent:	\$310,520
Total Watershed Improvement Funds obligated:	\$165,280
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 0

Project objectives:

- Administer the Saylor Creek Subwatershed Improvement Project Phase 2 to ensure all objectives and activities planned are implemented.
- Restore and protect the stream channel using a variety of practices including 900 lineal feet of creek toe armoring, 40,000 cubic yards of slope grading, 1,600 square yards of geotextile matting, 6 riffle/pool structures, 1 constructed wetland, and revegetation with 5 acres of native seeding, 3 acres of lawn seeding and 84 flats of prairie plantings/plugs.
- Develop an educational program featuring educational signage along a multipurpose trail to increase awareness and knowledge of Saylor Creek Subwatershed water quality issues to watershed residents, trail users, and the local community.

Summary of accomplishments and water quality outcomes

The project, which focused on stream channel restoration, is now complete. A variety of repair methods were selected based on their suitability to the stream and the particular streambank characteristics at particular locations. Best management practices included 19,500 cubic yards of earthwork for slope pullback, 12 riffle dams, 3,220 lineal feet of toe armoring that consisted of the A-Jacks® toe armor product as well as Filtrexx® filter socks filled with rock and native seed mixed with compost. Five areas of constructed wetlands were added, and 3 areas of existing wetlands were protected and enhanced. Selective harvesting was done of less desirable trees to open up the stream channel and banks to sunlight, while preserving trees that were providing slope stability. Seeding of 8.6 acres with deep-rooted native plant species was completed and provides improved stream buffers. An additional 9 acres were seeded with lawn mixture. The prairie planting plugs were eliminated during design (and an amendment was approved by the WIRB) so that funds from that line item could be used to increase the seeded areas and add a high quality mulch for quick establishment of the vegetation.

An educational sign was installed along the stream corridor, adjacent to a multi-purpose trail. The sign explains the various BMPs and how they improve water quality and habitat. The Spring 2010 issue of the Ankeny Report included an article on the project, explaining the scope of the improvements, as well as an explanation of "What is a watershed?".

The primary pollutant being addressed by this project was sediment. The improvements have been projected to reduce soil loss by over 98 percent.

Project Name: Silver Creek Watershed Project
Project Sponsor: Clayton Soil & Water Conservation District
Length of Project: January 1, 2010 to December 31, 2013

Counties included in the project area: Clayton

Total Watershed Improvement Funds awarded for this project:	\$ 365,950
Total Watershed Improvement Funds spent:	\$ 33,513
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 332,437

Project objectives:

- Reduce sediment delivery to Silver Creek by at least 3,000 tons.
- Promote stream corridor and sinkhole protection along critical areas of the watershed, and install buffer practices on an additional 30% of Silver Creek and its tributaries.
- Develop a series of news articles, newsletters, field days, and demonstrations to increase public understanding of water quality issues and to encourage public involvement and participation in water quality programs.

Summary of Accomplishments and Water Quality Outcomes

The successful development of the Comprehensive Plan of Work and execution of the WIRB Grant Agreement have further accelerated the adoption of conservation practices within the Silver Creek watershed. Since January 1, 2007, Silver Creek landowners have invested more than \$195,000 in conservation improvements on their farms, complementing financial incentives that are available from a number of state and federal resources. During 2010, and over the last 48 months, Silver Creek landowners have completed the following practices:

Table 1: Conservation Practices Installed through the Silver Creek Watershed Project

<i>Practice</i>	<i>Completed 1/1/10 to 12/31/10</i>	<i>Total Completed 1/1/07 to 12/31/10</i>	<i>Completed with WIRB Assistance</i>
CRP Buffers	3.2 Acres	32.5 Acres	
Pasture Management		60 Acres	
Streambank Protection		450 Feet	
Terraces	26,885 Feet	133,520 Feet	7,235 Feet
Grade Stabilization Structures	2 Structures	4 Structures	1 Structure
Grassed Waterways		6,650 Feet	

The practices installed in 2010 will reduce sediment delivery from sheet, rill, gully, and streambank sources by an estimated 1,034 tons (roughly 65 dump truck loads of sediment). Since 2007, it is estimated that sediment delivery has been reduced by 5,351 tons within the watershed, new filter strips buffer an additional 12,195' of Silver Creek and its tributaries, and cattle have been removed from 4,900' of the stream channel.

Promotional efforts have resulted in a core group of project cooperators. Continued support will expand project efforts, and will allow landowners to progress toward the reductions of sediment and ammonia that will ultimately remove Silver Creek from Iowa's list of impaired waters.

Project Name: Silver Lake Watershed Project
Project Sponsor: Osceola Soil & Water Conservation District
Length of Project: 01/01/2009-12/31/2011

Counties included in the project area: Dickinson & Osceola

Total Watershed Improvement Funds awarded for this project: \$474,540.00
Total Watershed Improvement Funds spent: \$ 90,261.45
Total Watershed Improvement Funds obligated: \$ 23,070.00
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$361,208.55

Project objectives:

- Conduct an information and education program tailored toward landowners and residents of the Silver Lake Watershed, so as to increase awareness of water quality issues facing Silver Lake, and what can be done to resolve them.
- Offer incentives to landowners and producers in the Silver Lake Watershed for wetland restoration via the Wetland Reserve Program (WRP) and Conservation Reserve Program (CRP). Work in conjunction with landowners and NRCS field staff to facilitate landowners with the enrollment and restoration of key wetland basins.
- Ultimately restore 250 acres of wetland basin, with an associated 900 acres of upland buffer through WRP and CRP practices.
- Significantly reduce sediment and nutrient loads entering Silver Lake.

Summary of accomplishments and water quality outcomes

The Silver Lake Watershed Project entered its second year in 2010. Due to an overall lack of interest in the Wetland Reserve Program, and a lack of funding for the program itself, we requested the option of offering WIRB incentives for wetland restoration via the Conservation Reserve Program (CRP). This request was approved in April 2010, and has provided local landowners with a "Plan B" for wetland restoration on their land.

Although we have submitted 2 applications for new WRP projects in the watershed, limited funding in this program gives us no concrete knowledge of if/when these applications will be accepted for restoration via federal funding.

Following the CRP amendment request in April, our coordinator has received 3 complete applications for CRP enrollment. The first was for the enrollment of approximately 150 acres into the Farmable Wetlands Program (FWP). This project was completed in November 2010, and included the restoration of 4 pothole basins. These basins will effectively filter sediment and nutrients from 195 adjacent acres of row crop. An estimated 10 tons/year of sediment delivery reduction will be realized as a result of this restoration project.

Another application for 30 acres of CRP was received in May of 2010, but this landowner was forced to cancel the CRP application because of conflicts with another conservation program. A third application for 20 acres of FWP was just secured in November 2010, and we hope to complete this restoration in spring 2011.

To complement conservation efforts in the Silver Lake Watershed, over \$1,500 was spent on project advertising via local radio stations in 2010. Likewise, \$5,544 in local funds was spent on watershed monitoring in 2010, which adds to our prior knowledge of water quality issues.

Project Name: Staff and Beaver Creek Watersheds
Project Sponsor: Howard Soil and Water Conservation District
Length of Project: July 1, 2009 to June 30, 2012

Counties included in the project area: Howard

Total Watershed Improvement Funds awarded for this project: \$392,950
Total Watershed Improvement Funds spent: \$148,556
Total Watershed Improvement Funds obligated: \$ 21,487
Watershed Improvement Fund unobligated balance as of 12/31/2009: \$222,907

Project objectives:

- Administer the Staff & Beaver Watershed Improvement Project to ensure all objectives and planned activities are implemented.
- Construct waste storage facilities, terraces, waterways and wetland creations and implement other conservation practices to reduce nutrient loading to the Staff and Beaver Creeks.
- Monitor sediment delivery and nitrate loading to Staff and Beaver Creeks.
- Conduct an information and education program to increase awareness and knowledge of Staff and Beaver Creeks' water quality issues to watershed residents and the local community.

Summary of accomplishments and water quality outcomes:

July 1, 2009 marked the beginning of the WIRB Staff and Beaver Watershed Project. Through the calendar year 2010 we have leveraged cost share dollars from WIRB, EQIP, CRP, WSPF, CSP and 319 to complete several practices in the watersheds:

- 1.) Terraces – 10,535 certified complete (319 & EQIP)
- 2.) Waste Storage Facility – 4 certified complete (EQIP & WIRB)
- 3.) Conservation Stewardship Program – 2,964 ac. under 6 contracts (CSP)
- 4.) Waterways – 17.6 ac. constructed (CRP, WSPF & 319)
- 5.) Wetland Creations – 3 constructed (319 & WSPF)
- 6.) Timber Stand Improvement – 7.0 ac. (EQIP)
- 7.) Nutrient Management – 142.3 ac. (WIRB)
- 8.) Grade Stabilization Structure – 1 constructed (EQIP)
- 9.) Native Grass Establishment – 3.8 ac. seeded (CRP)

Several other practices are under contract and in the process of being completed include:

- 1.) Terraces – 900' (EQIP & WIRB)
- 2.) Waterways – 10.2 ac (WIRB & CRP)
- 3.) Wetland Creations – 2 (WIRB)
- 4.) Timber Stand Improvement - 4.2 ac. (EQIP)
- 5.) Native Grass Plantings– 230.8 ac. (CRP)

We have calculated a sediment delivery reduction of 1,502 tons per year for the practices certified completed since July 1, 2009. Also we currently have 2 new EQIP applications and 7 new CSP applications.

Project Name: Storm Lake Watershed
Project Sponsor: Lake Preservation Association for Storm Lake, Inc.
Length of Project: February 1, 2009 – January 31, 2012

Counties included in the project area: Buena Vista County

Total Watershed Improvement Funds awarded for this project:	\$200,000
Total Watershed Improvement Funds spent:	\$29,460
Total Watershed Improvement Funds obligated:	\$0
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$170,540

Project objectives:

- Administer and implement all activities and objectives of the Little Storm Lake Watershed Improvement Project.
- Reduce the sediment transport by 75% and phosphorous transport by 58% from Little Storm Lake watershed (via Little Storm Lake) into Storm Lake.
- Conduct water quality monitoring and sediment analysis.
- Conduct educational and informational activities to keep the project partners and the public informed.

Summary of activities and accomplishments for calendar year 2010

An advisory committee has met regularly.

The final design has been approved by the advisory committee and partners. Bids were received on Dec. 16, 2010, with three bids received. The recommendation to approve the low bid will be presented to the Natural Resources Commission on Jan. 12, 2011.

Samples were collected at 3 locations every two weeks from April through October and after significant storm events. This will be used as the baseline monitoring. These samples were analyzed by SHL for the nitrogen series and phosphorous and total suspended solids.

Information has been provided to the two local newspapers and both have done articles at a regularly frequency to inform the local residents of the project and the progress. The design has been printed in both newspapers. Information on the project was provided to Lake Preservation Association members in the annual newsletter and at their annual meeting. Updates have been provided on a regular basis to the Lake Improvement Commission. A public meeting was held to provide an opportunity for questions and comments.

Project Name: Summit Lake Watershed
Project Sponsor: City of Creston
Length of Project: January 1, 2009 – December 31, 2011

Counties included in the project area: Union

Total Watershed Improvement Funds awarded for this project: \$ 493,117.00
Total Watershed Improvement Funds spent: \$ 170,747.38
Total Watershed Improvement Funds obligated: \$ 273,057.62
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 49,312.00

Project objectives:

- In hopes of making Summit Lake a viable water source and recreation lake, the WIRB funds are being used to:
 - Increase education and involvement of local citizens and stakeholders in the protection of the water body.
 - Monitor water supplies visually and through water sample analysis to determine changes in water quality during and after improvements.
 - Implement upstream land best practices to reduce soil and nutrient flow into Summit Lake
 - Implement shoreline stabilization to reduce soil erosion due to wave and rainfall action along the shoreline of Summit Lake.
 - Facilitate ancillary projects proposed by the IDNR, Creston Waterworks, Southern Iowa Rural Water Association, and other organizations to improve the quality of life and fishery of Summit Lake.
- In summary, the project will improve the physical and biological condition of Summit Lake immediately after completion and over the long-term.

Summary of accomplishments and water quality outcomes

Since the project beginning of the project in 2009, the facilitation team continued to meet with landowners about upland best practices. Dozens of landowners have been approached by NRCS staff, and 90% of projects have been completed. BMPs included 19,975 LF of terraces, 4.3 acres of grassed waterways, 8 water and sediment control basins, and 2 grade stabilization ponds. The final few projects are scheduled for 2011. At the lake, the Creston Waterworks engineered and bid the installation of 18,500 LF of riprap and related BMPs for shoreline stabilization. Work on the riprap will occur early 2011 and is underway now. In order to make the project more successful, Creston Waterworks collaborated with the IDNR, which lowered Summit Lake and completed a fish kill. The lowering allows for easier riprap installation and construction of fish habitat. Further, the fish kill removed thousands of undesirable fish—carp and yellow bass—that took over the lake and prevented plant growth. Toward the end of the year, a final plan was made for the means for water monitoring, the location for a large rain garden, and plans for water access control, including a mandated buffer strip along the shoreline of the lake. To date with two years of water monitoring data, we have inconclusive findings, mostly because the project is still underway and the lake area is being disturbed. Further, the lake remains drawn down, so we don't have a full picture of impact on water quality in the lake.

Project Name: Tributary B/Summerbrook Park Project
Project Sponsor: City of Ankeny
Length of Project: April 15, 2010 to October 31, 2011

Counties included in the project area: Polk County

Total Watershed Improvement Funds awarded for this project: \$ 169,800
Total Watershed Improvement Funds spent: \$0
Total Watershed Improvement Funds obligated: \$0
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$ 169,800

Project objectives:

- Administer the Tributary B/Summerbrook Park Project to ensure all objectives and activities planned are implemented.
- Complete a Targeted Public Education for individuals within the Tributary B watershed.
- Complete a Streambank Restoration on Tributary B.
- Construct Stormwater Best Management Practices Retrofits within Summerbrook Park.

Summary of accomplishments and water quality outcomes:

Public Education:

A public meeting for the Tributary B watershed was held that described the project and best management practices (BMP) homeowners could add to their properties. A rain garden training course was held for Ankeny residents and other interested individuals. One article was written in 'The Des Moines Register' describing the project. Six BMPs, including rain barrels and rain gardens were installed or planned to be installed within the watershed.

Streambank Restoration:

The engineering design for the streambank restoration was completed and approved. Public input was sought and easements were obtained from adjacent homeowners. The project will be put out for bid in February 2011 with work to commence in the spring of 2011.

Best Management Practices at Summerbrook Park:

The four native planting beds were designed with a variety of plant species. One of the four native planting beds was installed at Summerbrook Park.

The design of the bioretention cell was completed, reviewed, and finalized. The project was put out to bid and a contractor was selected. Work will commence in spring 2011.

Stream monitoring has been completed monthly at the lower section of Tributary B. Samples will be collected from the upper and middle reaches of Tributary B utilizing standard IOWATER sampling parameters.

Project Name: Upper Buffalo Creek Watershed
Project Sponsor: Buchanan County Soil and Water Conservation District
Length of Project: January 2010 – December 2013

Counties included in the project area: Buchanan and Fayette

Total Watershed Improvement Funds awarded for this project: \$494,569.00
Total Watershed Improvement Funds spent: \$ 59,931.72
Total Watershed Improvement Funds obligated: \$ 40,249.02
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$394,388.26

Project objectives:

- Administration of the watershed project (to attain goals and objectives).
- Reduce sediment delivery in the watershed by 40% (8,672 tons in four years) through implementing structural and management practices.
- Reduce nutrient loading (30% reduction in phosphorus). Conduct water quality monitoring and sediment delivery calculator to identify nutrient reductions.
- Increase aquatic habitat through recovery of the riparian corridor, prevent stream bank erosion, and improve pre-existing in-stream habitat.
- Conduct an information and education program to increase landowner awareness and knowledge. Provide technical and financial assistance for implementing structural and management practices.

Summary of accomplishments and water quality outcomes:

All project reporting (bi-annual, annual, ledger, funding requests, and cover sheets) was submitted to WIRB on/before deadlines. All progress has been reported to Buchanan and Fayette SWCD Commissioners. The annual project review was held (with sponsoring agencies) on 01/07/2011. The Watershed Advisory Committee provided insight on selling no-till and contour farming, and nutrient management plans. The Technical Advisory Committee provided insight on water quality monitoring, volunteer monitoring, and sediment delivery reduction. The Project Coordinator discussed conservation/management options during field visits with 20 individuals. Outside funding sources (CRP, EQIP, and IJOBS) were used when possible to implement practices. The Project Coordinator surveyed and designed 29 grassed waterways and one stream bank stabilization. The Project Coordinator figured cost-share for 27 projects. There were a total of 18 projects: 16 waterways (20.7 acres), 1 waterway outlet structure, and 1 filter strip (4.7 acres) implemented. Of these projects, 9.3 acres (WIRB), 8.6 acres (IJOBS), and 2.8 acres (CRP), were used for waterways; while 4.7 acres (CRP) were used for filter strips. The 18 completed practices have reduced sediment delivery by 733 tons/year and reduced phosphorus loading by 953 lbs/year. The Project Coordinator has followed the IDNR water quality monitoring plan (bi-monthly sampling). The IDNR included a biological assessment with the University of Iowa Hygienic Laboratory to better understand the conditions of the creek. The Project Coordinator has worked with East Buchan High School to obtain 10 water monitoring volunteers (totaling 28 volunteer hours). Information and education outreach has been carried out through mailings, news releases, county fair booth, and one-on-one field visits.

2010 Watershed Improvement Fund Annual Project Progress Report

Project Name: Volunteer Creek Watershed Improvement Project

Project Sponsor: City Of Carlisle

Length of Project: January 1, 2008 to December 31, 2010

Counties included in the project area: Warren

Total Watershed Improvement Funds awarded for this project:	\$367,500.00
Total Watershed Improvement Funds spent:	\$234,310.02
Total Watershed Improvement Funds obligated:	\$133,189.98
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 0.00

Project objectives:

- Administer the Volunteer Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Design and construction of a sedimentation basin west of Irwin Drive with associated vegetative buffer.
- Construct a bio-swale.
- Utilize storm water flow models to develop and implement standards, ordinances, and physical structures that will assist the City with the implementation of innovative watershed-based storm water control discharge measures before, during, and after development.
- Develop a comprehensive tool-kit that includes modeling approaches, conservation sensitive design strategies, and watershed-based regulations and ordinances that were utilized for or developed as part of this project.

Summary of activities and accomplishments for calendar year 2010

- Stormwater/Sediment detention basin, vegetative buffer, and bio-swale
 - 03/08/10 Changed basin stream per ACOE request.
 - 09/27/10 Wetlands exchange completed.
 - 08/15/10 Advertised bid.
 - 09/02/10 Pre-Bid meeting.
 - 09/14/10 Bid opening.
 - 11/08/10 Notice to proceed.
- Joint application submittal
 - 03/01/10 Met with ACOE on-site to go through and clarify project.
 - 07/14/10 Received joint application permit from ACOE.

Project Name: Walnut Creek Watershed Project
Project Sponsor: Montgomery & East Pottawattamie Soil and Water Conservation Districts
Length of Project: July 1, 2009 – June 30, 2012

Counties included in the project area: Montgomery, East Pottawattamie

Total Watershed Improvement Funds awarded for this project: \$489,455
Total Watershed Improvement Funds spent: \$367,773.98
Total Watershed Improvement Funds obligated: \$62,477.34
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$59,203.68

Project objectives:

- To reduce the amount of sediment being deposited in Walnut Creek by 2,000 tons

Summary of accomplishments and water quality outcomes

This past fall was an excellent construction season for conservation practices in Southwest Iowa. The pleasant weather allowed many jobs which were carried over from the year before to be completed as well as a vast majority of the new jobs. Thus far in two construction seasons we have managed to construct 174,773 feet of terraces, 4.6 acres of waterways, and two grade stabilization structures. Sediment reductions from these practices total 3,773 tons of sediment reduced per year, far surpassing our original goal of 2,000 tons. This proves that practices are being targeted to the most sensitive areas of the watershed. Several landowners, knowing that their projects will not be funded, are putting practices in with no cost share.

One crucial practice which we are struggling to get implemented is filter strips along perennial streams. Pheasants Forever was generous in donating \$10,000 to be used for incentives for the practice. At first the response was fairly positive. The first week after the announcement we signed up over thirty acres. But as the price of corn and soybeans skyrocketed many of those applicants reversed their decisions.

Another crucial practice in the success of our project is making two in-stream weirs fish passable. The Hungry Canyons Alliance has applied for a grant through the fish and wildlife service to accomplish this. Hopefully this spring we will find out if we received the grant.

This coming year we should exhaust all of our WIRB funding for this project. Much more work could still be done in the watershed. Landowners in the watershed are jumping at the opportunity to conserve their land.

Project Name: Walnut Creek Watershed Improvement Project
Project Sponsor: Poweshiek County Soil and Water Conservation District
Total Length of Project: January 1, 2010 to June 30, 2013

Counties included in the project area: Poweshiek County

Total Watershed Improvement Funds awarded for this project: \$213,000.00
Total Watershed Improvement Funds spent: \$ 29,509.18
Total Watershed Improvement Funds obligated: \$ 33,917.75
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$149,573.07

Project objectives:

- Administer the Walnut Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Install Conservation Practices on areas where 50% or more of the land has 1 ton/yr soil loss or more.
- Reduce sediment delivery to Walnut Creek by 3,205 tons of sediment per year.
- Continue an Information and Education program to increase awareness and knowledge of Walnut Creek water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes:

Poweshiek County SWCD approved two new projects: Lidtka waterway project located in an area with 1.2 tons/acre sediment delivery, and Jones basin project in an area with over 2 tons/acre sediment delivery. Jones also wanted to do a waterway project, but could not meet the upland treatment requirement.

As the ledger shows, many of the watershed funds were used up to pay on waterway projects that were approved in fall 2009, and previously. The length and width of the waterways did not change significantly, however, the means to which the depth and slope was obtained was not reflected at all in the EQIP estimate for these projects. Some of the waterway projects were large in scope and required large amounts of excavation at a larger cost than was recorded. As a result, the Poweshiek SWCD, and local NRCS staff has now implemented much higher caution towards future waterway projects, especially the large ones.

Project Name: Walnut Creek Watershed Project
Project Sponsor: Montgomery and East Pottawattamie Soil and Water Conservation Districts
Length of Project: January 5, 2010 to January 31, 2014

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project: \$200,000
Total Watershed Improvement Funds spent: \$0
Total Watershed Improvement Funds obligated: \$0
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$200,000

Project objectives:

- Reduce sediment delivered to Walnut Creek by 200 tons.

Summary of accomplishments and water quality outcomes

This is the first year for the second water quality project in the Walnut Creek Watershed. Landowners are very excited at the opportunity to install conservation practices on their farm. Interest is extremely high and many applications have already been collected. Applications will be ranked and approved later this winter.

Americorp and DNR have hired an employee to devote part of their time towards the promotion of filter strips and wetlands in the watershed.

This project has all the makings to be just as successful as the first project. Landowner interest is high. We are currently targeting landowners in East Pottawattamie who really need conservation on their farms but were reluctant to do anything a few years ago.

Project Name: Williamson Pond
Project Sponsor: Watershed Improvement Review Board
Length of Project: November 22, 2010 to December 31, 2012

Counties included in the project area: Lucas

Total Watershed Improvement Funds awarded for this project: \$116,500.00
Total Watershed Improvement Funds spent: \$0
Total Watershed Improvement Funds obligated: \$0
Watershed Improvement Fund unobligated balance as of 12/31/2010: \$116,500.00

Project objectives:

- Administer the Williamson Pond Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Construct three grade stabilization structures and seventeen water and sediment basins on State Owned land.
- Reduce sediment delivery to Williamson Pond by 453 tons of sediment and 589 pounds of phosphorus per year.
- Conduct an information and education program to increase awareness and knowledge of Williamson Pond water quality issues to watershed residents, lake users, and the local community.
- Miscellaneous activities

Summary of accomplishments and water quality outcomes

A Plan of Work was developed and submitted to Jerry Neppel for WIRB review on December 14, 2010.

Submitted a project report on project progress to Lucas County SWCD commissioner meeting December 16, 2010 stating the East side water and sediment basins proposed for the pond's State Owned land are in the process of being designed. As of December 28, 2010 the East side water and sediment basins are designed. 319 desired that the structures on the East side be designed before January 2011. The deadline was met.

Two POL funded terrace projects that were built in November were approved by Lucas County SWCD commissioners for payment at the December meeting. Estimated Sediment Delivery Reduction for both was a total of 93 tons per year.

Project Name: Yellow River Headwaters
Project Sponsor: Winneshiek Soil and Water Conservation District
Length of Project: December 15, 2010 - December 31, 2014

Counties included in the project area: Winneshiek and Allamakee

Total Watershed Improvement Funds awarded for this project:	\$ 200,000.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	\$ 0.00
Watershed Improvement Fund unobligated balance as of 12/31/2010:	\$ 200,000.00

Project objectives:

Goal 1: Decrease sediment delivery to the YRHW by 50% over the next 4 years.

- **Objective I:** Work with landowners in targeted areas of the YRHW to implement the most effective BMPs to reduce sediment delivery to the stream, thus reducing turbidity

Goal 2: Decrease bacteria loading to the YRHW by 35% over the life of the project.

- **Objective I:** Work with landowners in the YRHW to implement BMPs to reduce bacteria run-off from open feedlots
- **Objective II:** Work with landowners in the YRHW to change grazing practices to reduce bacteria delivery.
- **Objective III:** Work with landowners in the YRHW to update/improve septic system function to reduce bacteria loading.

Goal 3: Reduce livestock access to the stream by 75% over the life of the project.

- **Objective 1:** Work with landowners in the YRHW to restrict livestock access to the stream.

Goal 4: Increase the culture of conservation among landowners in the YRHW.

- **Objective 1:** Highlight producer's contributions and investment into project participation and promotion of conservation participation.

Summary of accomplishments and water quality outcomes

The invested SWCD's and WIRB initiated a cooperative agreement to allocate funding to willing producers in the targeted priority areas of the Yellow River Headwaters watershed project. A Plan of Work was established stating objectives and goals with action items detailing the intended direction of the granted funds. An annual report was completed submitted.